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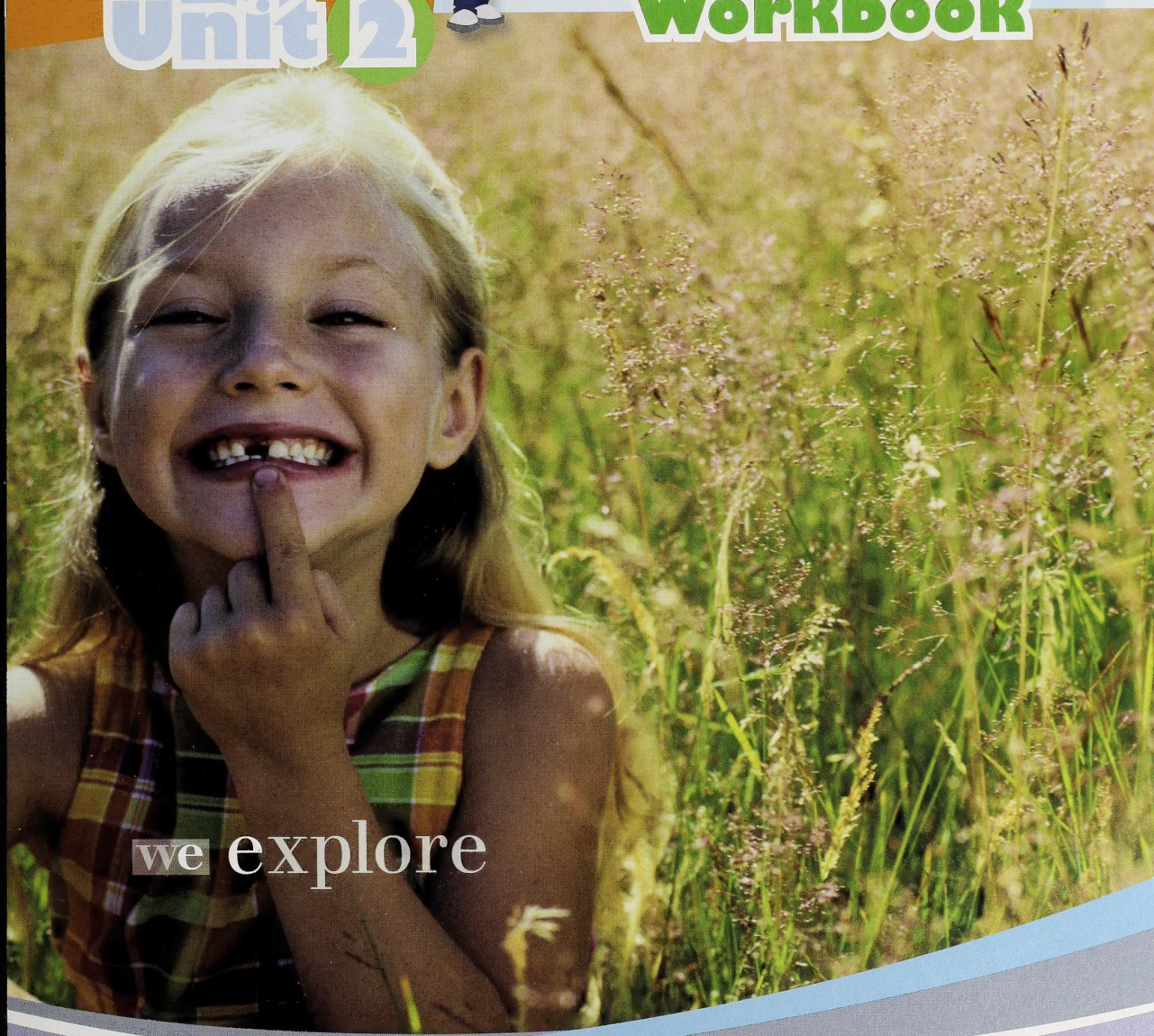
Learn EveryWare

Math 4

Unit 2

Workbook



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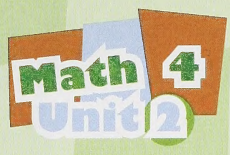

Math 4 Learn EveryWare – Unit 2 Workbook
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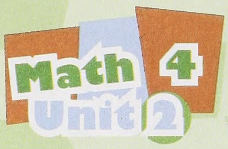

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Math 4
Unit 2

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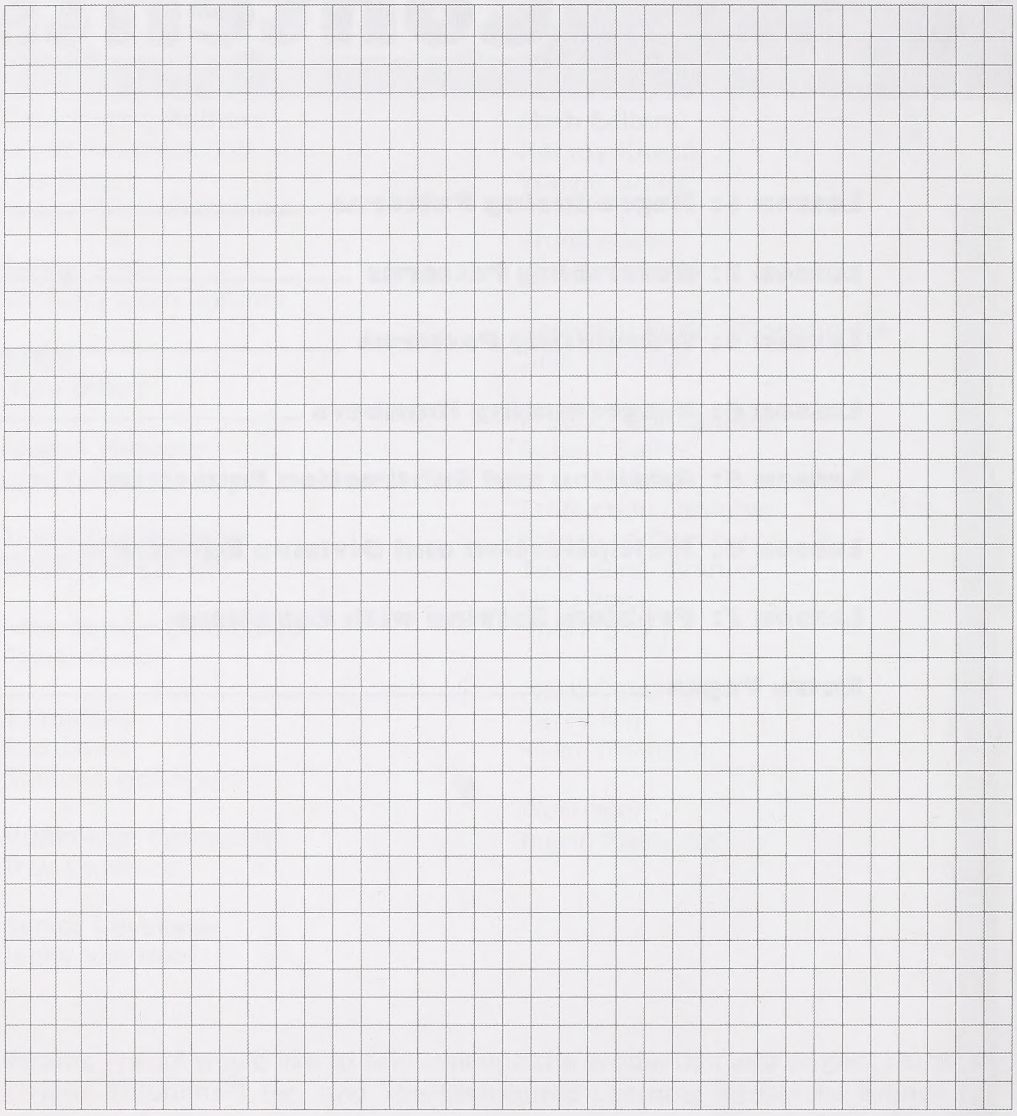


Math 4 Unit 2

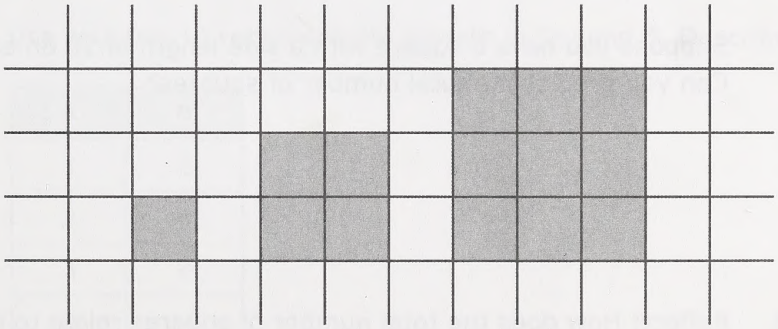
Lesson 1

Reproducing Patterns

Exploration 1: Square Patterns

Materials: Grid Paper from the back of this Unit in your Workbook, Pencil

1. Shade a 1 x 1 (1 by 1) square on your grid paper.
2. Shade a 2 x 2 square on your grid paper.
3. Shade a 3 x 3 square on your grid paper.



4. Continue creating as many squares as you need to find the pattern.

5. Complete the table for the side length and the total number of squares:

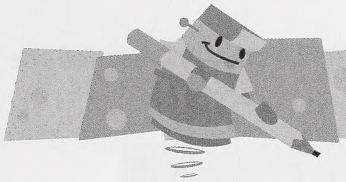
Each Side Length	Total Number of Squares
1	1
2	4
3	9
4	
5	
6	
7	

6. What is the pattern you see in the total number of squares?

7. Suppose you have a square with a side length of 10 on each side. Can you predict the total number of squares?

8. Reflect: How does the total number of squares relate to the length of each side?

Lesson 1: Reproducing Patterns



Let's Practice

1. The following chart represents the Perimeter and Area of the figures shown.

Figure	1	2	3	4	5
Perimeter	4	6	8		
Area	1	2	3		

Draw the fourth and fifth figures in this pattern and complete the chart.

2. Use counters to represent the pattern in Column B. Describe the rule.

A	B
1	1
2	4
3	9
4	16

3. Use counters to represent the pattern in Column B. Describe the rule.

A	B
1	2
2	4
3	6
4	8

4. Draw dots on this paper to represent the pattern in Column B. Describe the rule.

A	B
1	10
2	20
3	30
4	40

5. Draw dots on this paper to represent the pattern in Column B. Describe the rule.

A	B
1	2
2	4
3	8
4	16
5	32

6. Use counters to find the values for Column B that are missing from the table.

A	B
1	1
2	5
3	9
4	13
5	17
6	
7	
8	
9	
10	

7. Sheri wants to make a necklace with red and white beads to celebrate Canada Day. The chart below gives the pattern for the beads. Draw what the necklace will look like after 1 bead is added, after 2 beads are added, and all the way up to 10 beads.

Bead Number	Colour
1	white
2	white
3	red
4	white

a. How many red beads will she need to make the necklace?

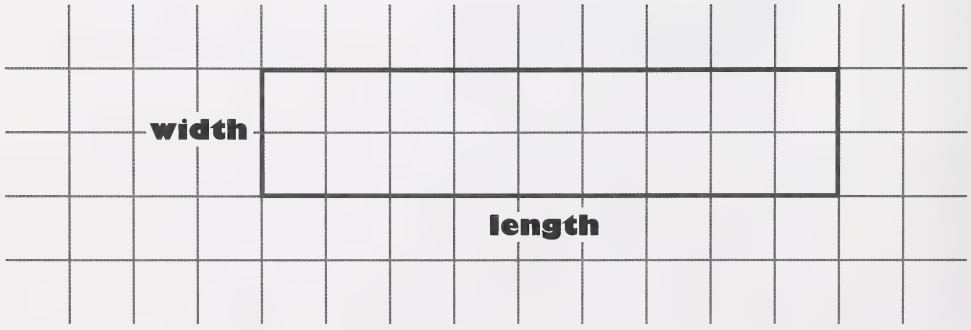
b. How many white beads will she need to make the necklace?

8. Reflect: Look around your home or classroom for patterns. Describe two or more patterns that you see.

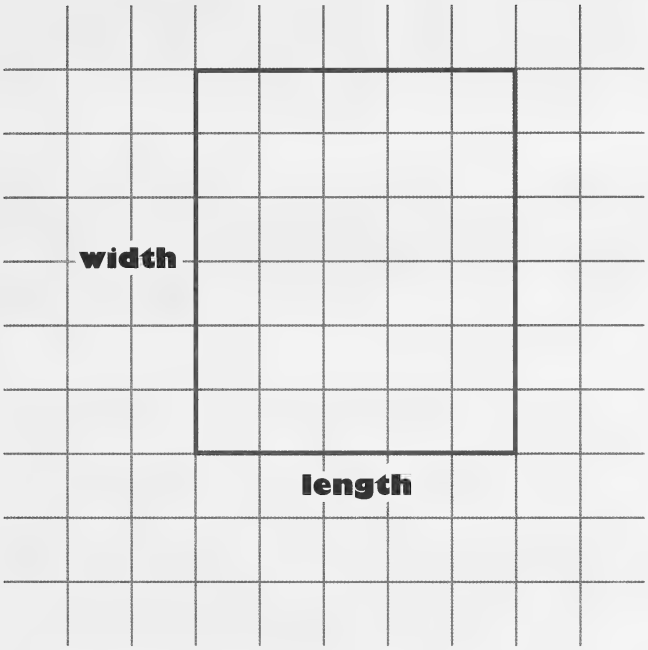
Mixed Review

For 1 - 2: Identify the length and width of each figure.

1. Length _____ Width _____



2. Length _____ Width _____

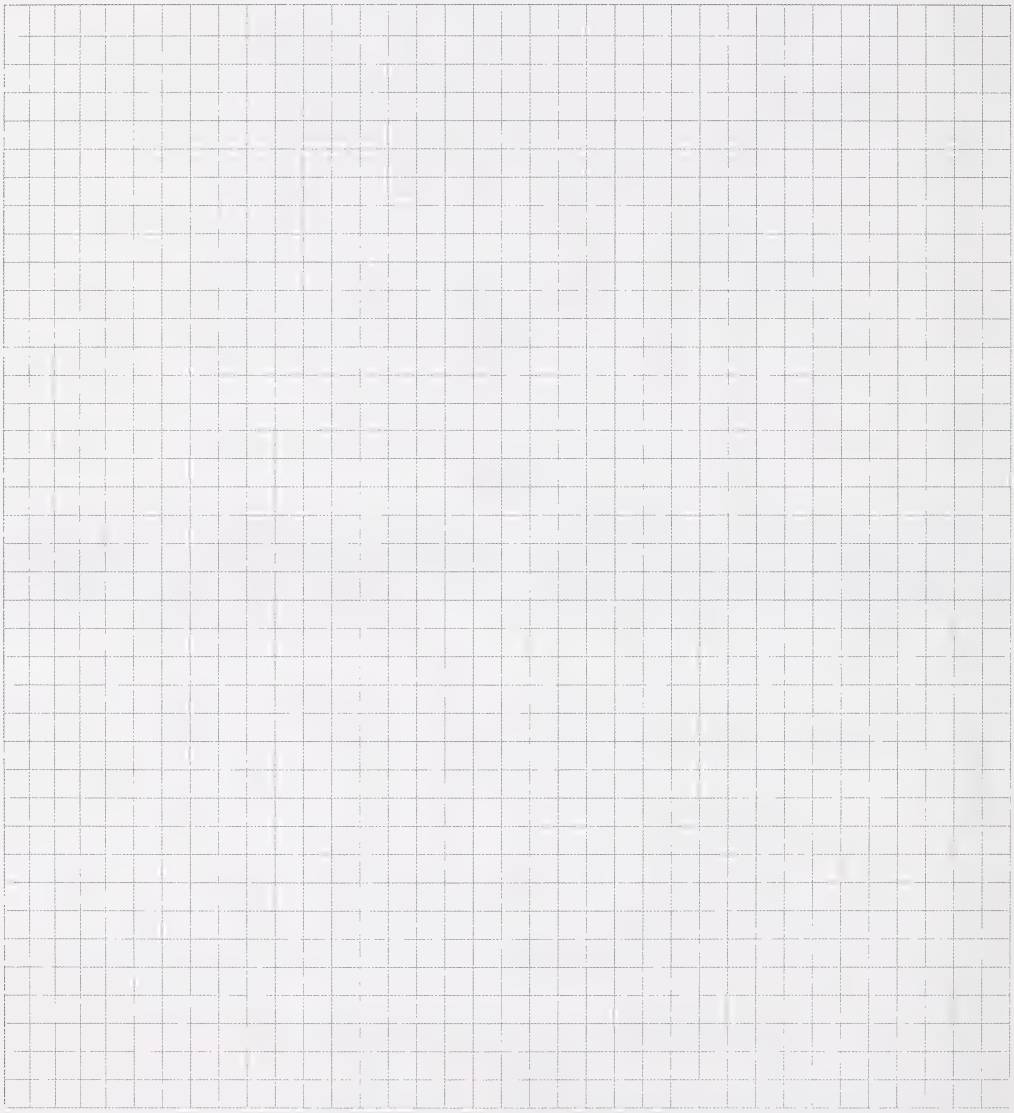


For 3 - 5: Complete the pattern:

3. 120, 110, 100, 90, 80, _____, _____, _____

4. 12, 20, 28, 36, 44, 52, _____, _____, _____

5. 28, 31, 34, 37, 40, 43, _____, _____, _____



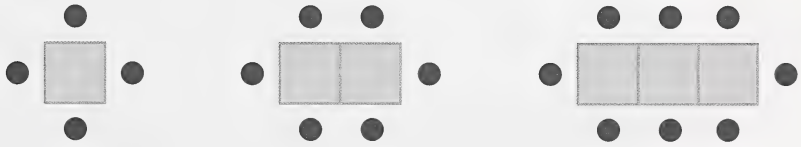
Lesson 2

Describing Patterns

Exploration 1: Table Planning

Materials: Square counters, Dry peas, Pencil

Mrs. Smith is planning a birthday party. She has square tables that she lines up in a row. In this figure, squares represent the tables and purple circles represent the chairs.



1. Use square counters and peas to model this situation.

2. Fill in the table for the pattern. Relate the number of tables to the number of people that can be seated.

Number of Tables	Number of People
1	4
2	6
3	8
4	
5	
6	
7	

3. What pattern do you notice in the Number of People column? Describe the pattern to your group or a partner.

4. How many people can sit at a grouping of 4 tables? 5 tables? 6 tables? 7 tables?

5. How many tables will Mrs. Smith need to seat 18 people?

6. Can you think of a rule that relates the number of tables to the number of people?

Exploration 2: Multiplication Patterns

Materials: Crayons, Counters, Hundreds Charts and Multiplication Tables from the back of this Unit in your Workbook

1. Use crayons and a Hundreds Chart to highlight numbers found by skip-counting two or more of the following:

by twos	**by threes**	**by fours**
by fives	**by sixes**	**by sevens**
by eights	**by nines**	**by tens**

If you are working in pairs or groups, each group should choose different patterns.

2. Can you find the pattern that begins: 3, 6, 9, 12... on the multiplication table? What three numbers will come next when you extend this pattern?

3. Tell a friend about one pattern that you found on the Hundreds Chart. How would you describe that pattern to a friend?

4. Tell a friend about one pattern that you found in the multiplication table. How would you describe that pattern to a friend?

5. Suppose that you wanted to find a pattern of even numbers. Where would you look?

6. Skip-counting by what numbers will include 100 as part of the pattern?

7. Count by 2s beginning with 1 in the Hundreds Chart. What pattern do you notice? Why?

8. What pattern do you notice when skip-counting by 10s starting with 3? Why?

9. A square number is made by multiplying a number by itself.

   1 x 1 = 1, 2 x 2 = 4, 3 x 3 = 9...

   1, 4, 9, 16...are all square numbers.

   Colour all of the square numbers in the multiplication table.

   Describe the pattern.

Let's Practice

For 1 - 6: Describe the pattern of Column B in each table:

1. _____

A	B
1	3
2	12
3	21
4	30
5	39

2. _____

A	B
1	48
2	24
3	12
4	6
5	3

3. _____

A	B
1	120
2	115
3	110
4	105
5	100

4. _____

A	B
1	2
2	6
3	18
4	54
5	162

5. _____

A	B
1	81
2	27
3	9
4	3
5	1

6. _____

A	B
1	13
2	20
3	27
4	34
5	41

For 7 - 10: Extend the pattern in the table given.

7. _____

A	B
1	5
2	11
3	17
4	
5	
6	
7	

8. _____

A	B
1	99
2	92
3	85
4	
5	
6	
7	

9. _____

A	B
1	1
2	3
3	9
4	
5	
6	
7	

10. _____

A	B
1	78
2	73
3	68
4	
5	
6	
7	

For 11 - 14: Identify and correct errors in the tables.

11. B = _____ for A = _____

A	B
1	3
2	5
3	8
4	9
5	11

12. B = _____ for A = _____

A	B
1	4
2	8
3	16
4	32
5	60

13. B = _____ for A = _____

A	B
1	100
2	97
3	94
4	91
5	87

14. B = _____ for A = _____

A	B
1	25
2	50
3	75
4	80
5	125

For 15 - 18: Find the missing number in the table:

15.

A	B
1	25
2	30
3	35
4	
5	45

16.

A	B
1	81
2	
3	63
4	54
5	45

17.

A	B
1	9
2	
3	23
4	30
5	37

18.

A	B
1	64
2	
3	16
4	8
5	4

For 19 – 25: Use the following pizza chart to answer the questions.

Number of Slices	Pieces of Mushroom	Pieces of Sausage	Pieces of Pepperoni
1	5	4	3
2	10	8	6
3			9
4	20		12

19. How many pieces of mushroom are on 3 slices of pizza?

20. Describe the pattern in the mushroom column.

21. How many pieces of sausage are on 3 slices of pizza?

22. Describe the pattern in the pepperoni column.

23. Extend the pepperoni pattern 3, 6, 9, 12 . . . for the next three numbers.

24. How many slices of pizza can you make if you have 30 pieces of mushroom?

25. Extend the sausage pattern for 3, 4, and 5 slices of pizza.

For 26 – 29: Use the chart that relates hours to minutes to answer the questions.

Hours	Minutes
1	60
2	120
3	180
4	240
5	
6	

26. How many minutes are in 5 hours?

27. How many minutes are in 6 hours?

28. How many hours are in 420 minutes?

29. Describe the pattern in the Minutes column.

For 30 – 32: Use the chart that relates weeks to days to answer the questions.

Weeks	Days
1	7
2	14
3	21
4	
5	

30. How many days are in 4 weeks?

31. How many weeks are in 49 days?

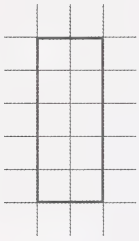
32. How many days are in 10 weeks?

33. Reflect: What are the most challenging pattern descriptions for you to identify?

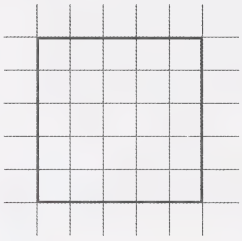
Mixed Review

For 1 - 2: Perimeter is the distance around a figure. Find the perimeter of the rectangles shown in the grids:

1. _____



2. _____

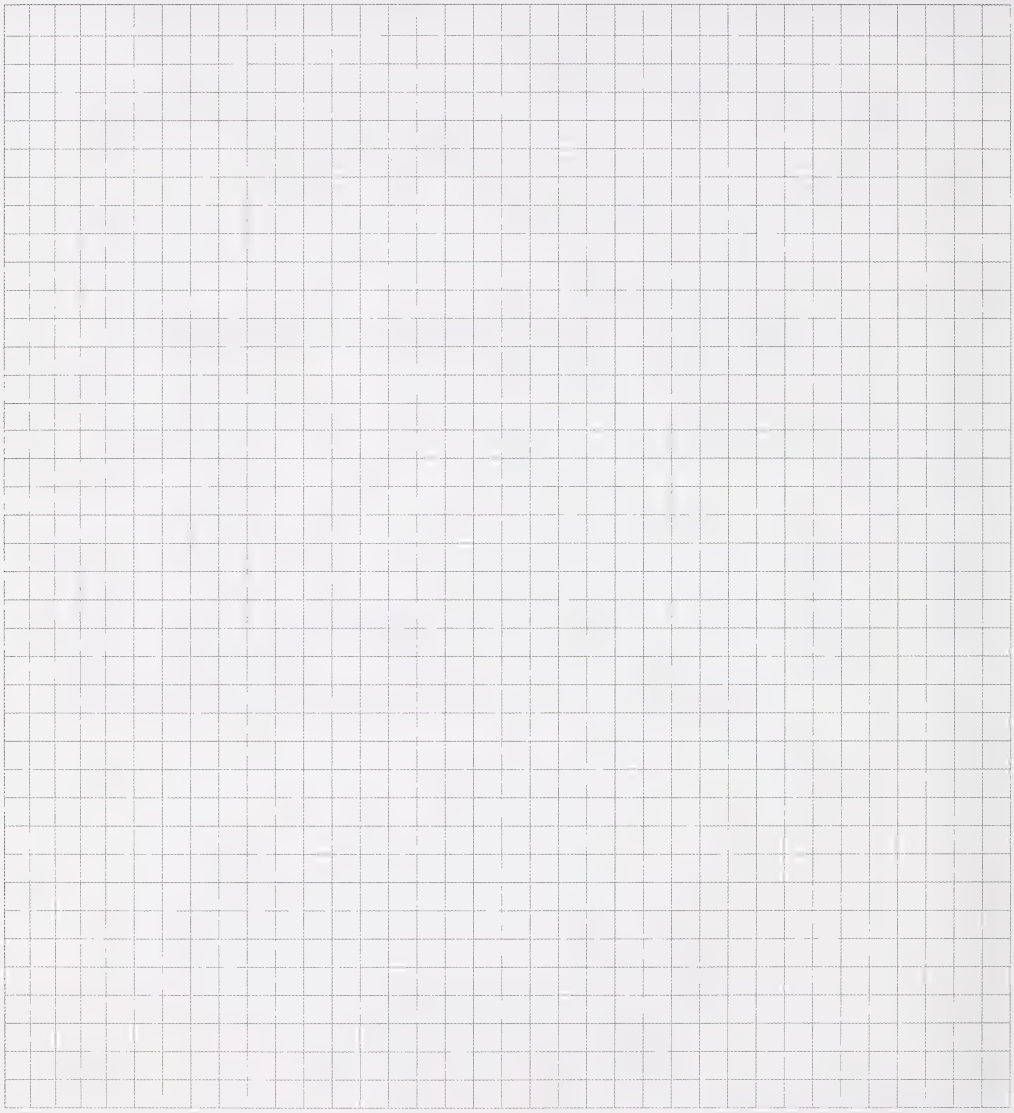


For 3 - 4: Write a number sentence for the following problems. Solve.

3. Daksha picked up 20 pieces of trash. Cameron picked up 28 pieces of trash. How many pieces of trash did they pick up all together? Write a number sentence and find the answer.

4. Mr. Gardner likes to stay in shape by running. He runs 12 kilometres each day, Monday through Friday. How many kilometres does he run in one week? Write a number sentence and find the answer.

5. Reflect: 32 ÷ 8 = 4 and x 4 = 32. What is ? How do the problems relate?



Lesson 3

Translating Patterns

Exploration 1: Toothpick Triangles

Materials: Toothpicks, Pencil

1. Form a triangle with 1 toothpick on each side. Count the number of toothpicks in the triangle.

2. Form a triangle with 2 toothpicks on each side. Count the number of toothpicks in the triangle.

3. Continue forming triangles using this pattern until each side has 5 toothpicks.

4. What pattern do you notice in the number of toothpicks? Why do you think this pattern happens?

5. How many toothpicks would be in a triangle with 7 toothpicks on each side? How many toothpicks would be in a triangle with 20 toothpicks on each side? What is the rule?

6. If you repeated this experiment creating a square each time, how would the pattern change? What is the rule for finding the number of toothpicks in a square?

Exploration 2: Special Patterns in Nature

Many of the natural patterns are the most beautiful to see. The following pictures are examples of these types of patterns:

The pattern of the scales of the pinecone and the fruitlets of the pineapple are in a special pattern. This pattern is part of the Fibonacci Numbers. It is a famous pattern discovered by a man named Fibonacci. Let's look at the Fibonacci pattern:

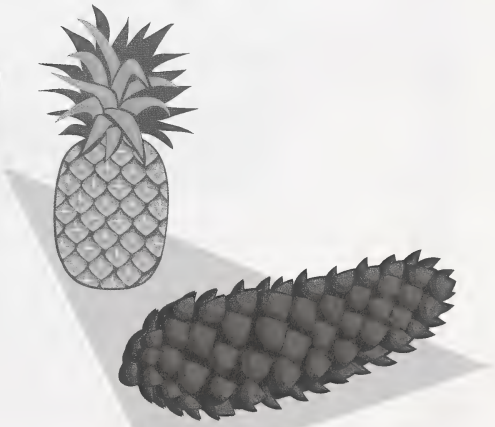
The two starting numbers are 0 and 1.

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55 ...

Do you see the pattern?

Hint: The third number in the pattern is the sum of the two starting numbers.

0, 1, so the third number is 0 + 1 = 1



Hint: The fourth number is the sum of the second and third number:

0, 1, 1, so the fourth number is 1 + 1 = 2

1. Can you figure out what number comes after 55?

2. Extend the Fibonacci pattern to the 15th number.

3. Have you seen any Fibonacci numbers in your yard or neighbourhood?

Let's Practice

1. Nina is saving money for a new music player.

Months	Balance in Dollars
1	25
2	50
3	75
4	100
5	125

a. If she continues to save as the chart shows, how many months will it take her to save $300?

b. What is the rule to go from the number of months to the balance in dollars?

2. The community daycare must have a certain number of teachers for the number of students. For 135 children, how many teachers are needed?

Children	15	30	45	60	75	90	105	120	135
Teachers	5	10	15	20	25	30			

3. Alyssa is being paid for a weekend gardening job. Her pay is in the table shown.

Hours of Work	**Dollars of Pay**
1	7
2	10
3	13
4	16
5	19

a. How much will she make for working eight hours

b. Can you find a rule to relate hours of work to dollars of pay? If not, describe the relationship in words?

4. You are buying some candy for you and your friends. The cost of the candy is shown in the table.

Number of Pieces of Candy	Cost in Dollars
10	1.50
20	3.00
30	4.50
40	6.00
50	7.50

a. You want to buy 35 pieces of candy. How much will the candy cost?

b. You have $12 to spend on candy. How many pieces can you buy?

5. The space kids want to order a pizza. They want 7 toppings. How much will they pay for 7 toppings?

Number of Toppings	Cost in Dollars for Pizza
2	10
4	16
6	22
8	28
10	34

6. You are starting a new job and you get to decide which option you will take for pay. Extend the table as much as you need. You will work 100 days in a year. Which option will you choose and why?

Option 1	Option 2
You make 1 cent the first day and then your salary is doubled every day.	You make $600 per day.

Day	Salary
1	0.01
2	0.02
3	0.04
4	0.08

Day	Salary
1	600
2	600
3	600
4	600

7. Mrs. Davis drew a table on the board. She asked her students to find what happens to the numbers in Column A to get the numbers in Column B. Describe the rule and use it to find the Column B value for 3.

A	B
12	144
11	132
10	120
9	108
8	96

8. There are 42 National Parks in Canada. If you visit 2 per month, how many months will it take you to visit all 42?

Number of Months	10	11	12	13	14	15	16	17	18
Parks Visited	20	22	24	26	28	30	32	34	36

9. The tickets for the school carnival are on sale. How many tickets can Cameron purchase for $32?

Number of Tickets	10	20	30	40	50
Cost in Dollars	4	8	12	16	20

10. What is the cost of 35 tickets?

11. How did you get your answer in 10?

12. Describe the relationship of ◯ to △.

◯	△
1	5
2	10
3	15
4	20
5	25

13. Describe the relationship of A to B.

A	B
1	7
2	14
3	21
4	28
5	35

14. Describe the relationship of C to D.

C	D
1	6
2	7
3	8
4	9
5	10

15. Reflect: What do you like most about solving problems with tables and charts, and why?

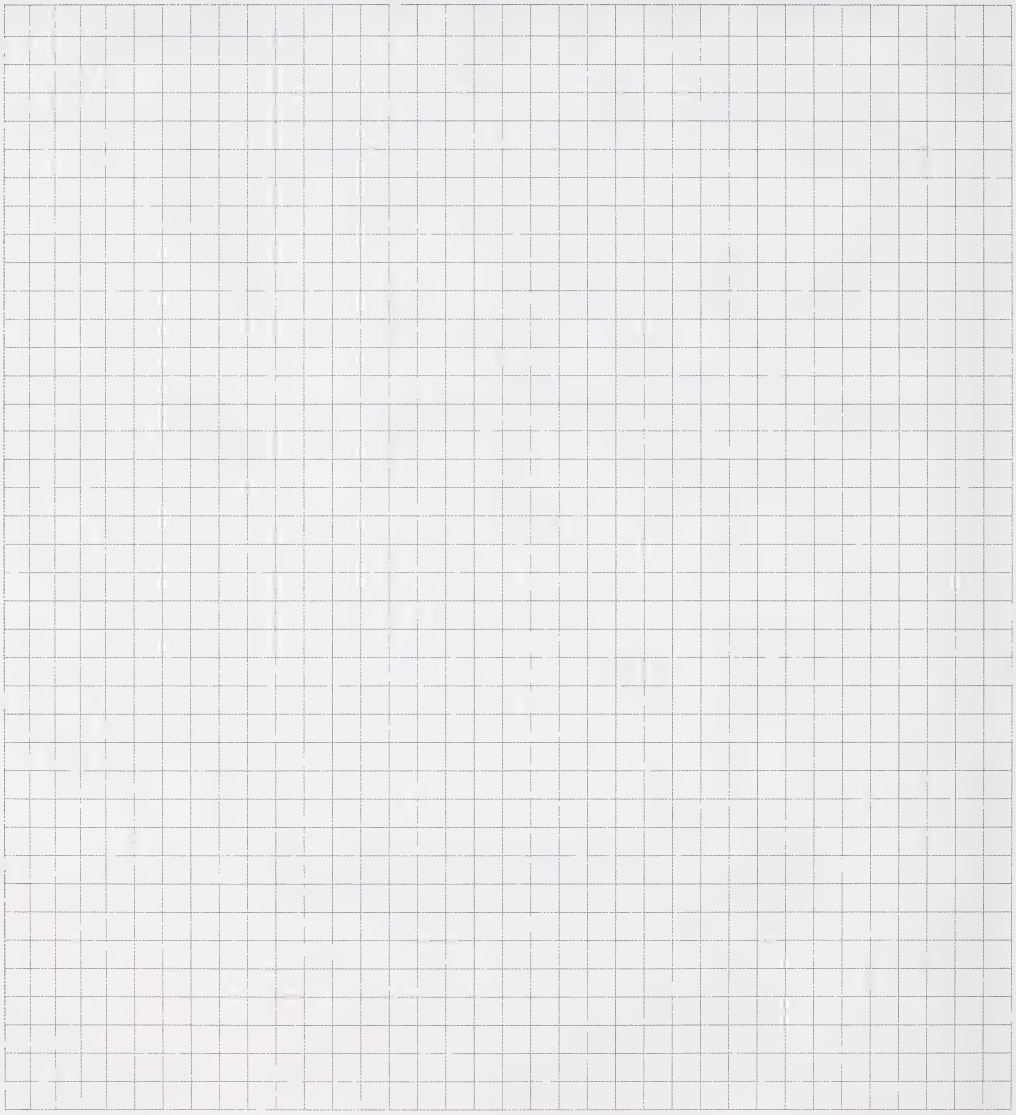
1. Add: 3.02 + 4.56

2. Subtract: 5.76 – 4.2

3. Multiply: 25 x 8

4. Divide: 72 ÷ 9

5. Write a number sentence to solve the problem:
   There are 12 friends going to a movie. Tickets are $6 each.
   How much will it cost for the friends to see a movie?



Lesson 4

Diagramming Numbers

Exploration 1: Creating Venn Diagram Rules

Materials: Geometry labels and shapes from the back of this Unit in your Workbook, String, Crayons, Pencil, Small piece of paper

Prepare your materials:

a. Cut out the geometry labels and the shapes from your workbook.

b. Colour in the different shapes with your crayons. There are three shapes in each size. Colour one shape yellow, one red and one green for each of the different sizes.

c. Cut out two long pieces of string.

d. Make a chart on your piece of paper for keeping score.

Work with a partner or in groups of four. One group will be Group A. The other group will be Group B.

1. Make a Venn diagram by taking two long pieces of string and creating two circles for sets A and B.

2. Group A: Create rules for A and B. Display shapes on the Venn diagram that meet your rules. Don't tell Group B your rules.
3. Group B: Figure out the rules for A and B. Label the regions with your geometry labels.
4. Group A: Reveal the rules.
5. If Group B is correct, give them 1 point.
6. Continue taking turns in this manner until you have each had 5 turns.

   The best score out of 5 wins.

For 1 - 3: Make Carroll diagrams for each of the following:

1. Given the set: {24, 40, 67, 82, 30, 14, 55, 20, 15}, which numbers are greater than 50?

2. Given the set: {2, 6, 10, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22}:
   Attribute #1: Prime Attribute #2: Odd

3. Given the set: {3, 5, 12, 15, 18, 21, 30, 31, 45, 50, 60}:
   Attribute #1: Prime Attribute #2: Divisible by 3

For 4 – 7: For each of the following, add the elements of the set to the Carroll diagram or Venn diagram.

4. {5, 13, 16, 20, 61}

	Prime	**Not Prime**
Less Than 20	3 7 11	4 8 9 15 18
Not Less Than 20	23 47	28 45 91

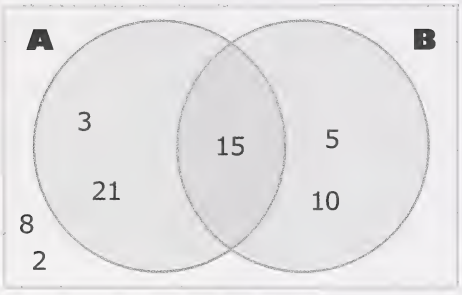
5. {3, 18, 23, 54, 58, 81, 96}

	Divisible by 6	**Not Divisible by 6**
Divisible by 3	6 12 24	15 21 33
Not Divisible by 3		10 16 26

6. {6, 18, 25, 45, 60}

A = divisible by 3

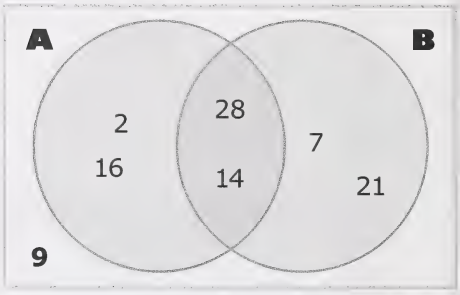
B = divisible by 5



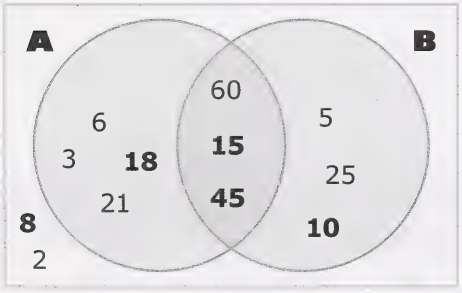
7. {23, 49, 70, 82, 84, 91}

A = Even

B = divisible by 7



8. Write the rules for regions A and B:



9. Write the rules for regions A and B:

For 10 – 13: Make a Venn diagram for each of the given sets.

10. For the following shapes use the rules:

    A = 4 sides B = Rectangles

11. {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10} Rule: A = Odd

12. {2, 9, 10, 15, 18, 26, 27, 45, 58, 63, 90}

    A = Even B = Divisible by 9

13. 42 students were surveyed about their favourite foods. 21 students like pizza. 18 students like milkshakes. 12 students like both pizza and milkshakes.

    a. How many students like milkshakes only? _____

    b. How many students like pizza only? _____

    c. How many students like neither pizza nor milkshakes? _____

14. Reflect: You are given a set of numbers and asked to sort them based on whether they are even or divisible by 5. Describe the method you would use and why you chose that method.

Mixed Review

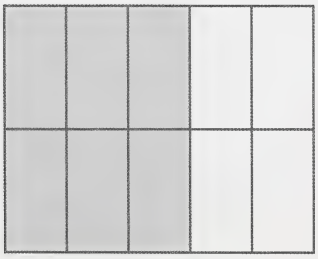
1. 328
   x 2

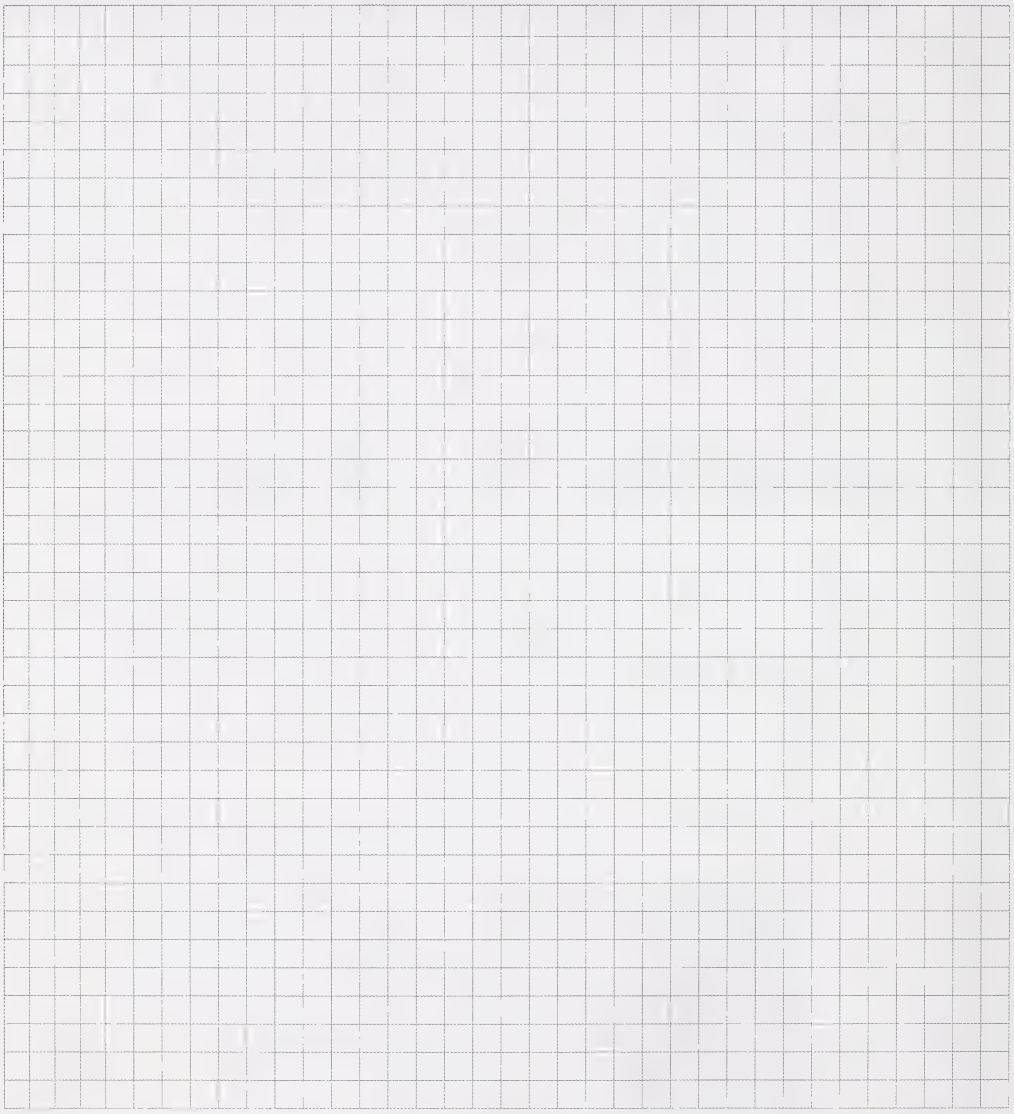
2. 457
   x 6

3. 6864
   -4892

4. 5893
   -3286

5. Write a fraction and a decimal for the shaded part of the figure:





Lesson 5

Addition and Subtraction Equations

Exploration 1: Modelling Addition and Subtraction Equations

Materials: Algebra Tiles, Part-Whole Mat

Model the equations using your Algebra Tiles and Part-whole Mat. Solve.

1. □ + 5 = 8
   □ = _____

2. □ − 3 = 7
   □ = _____

3. △ + 2 = 9
   △ = _____

4. △ − 8 = 2
   △ = _____

5. ○ + 4 = 9
   ○ = _____

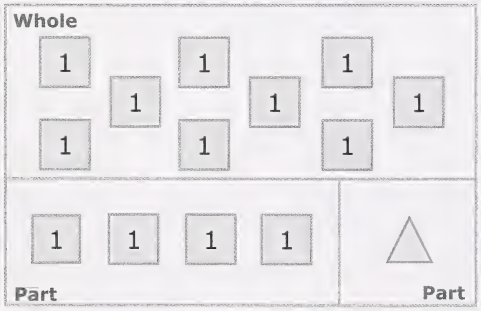
6. ○ − 6 = 8
   ○ = _____

7. Reflect: What do you do to solve an addition equation?

8. Reflect: What do you do to solve a subtraction equation?

For 1 - 6: Write an equation for the part-whole model. Next, find the unknown value.

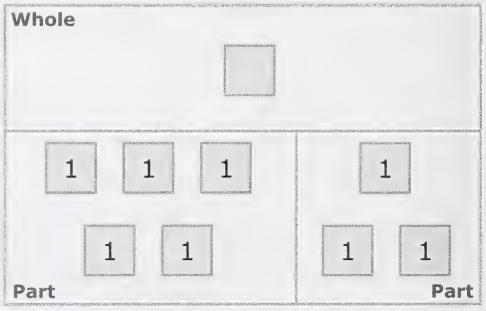
1.



Equation: _____

△ = _____

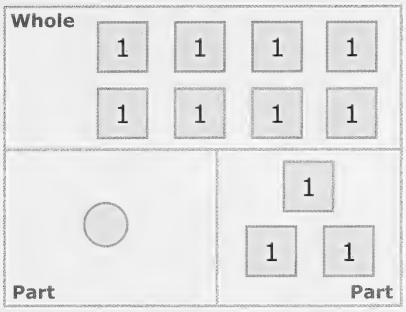
2.



Equation: _____

□ = _____

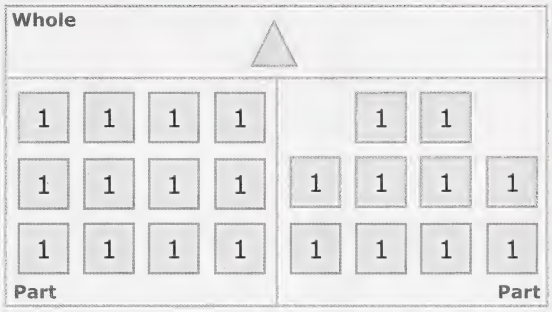
3.



Equation: _____

○ = _____

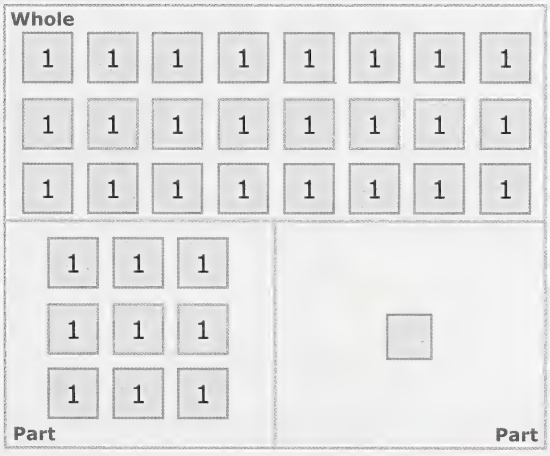
4.



Equation: _____

△ = _____

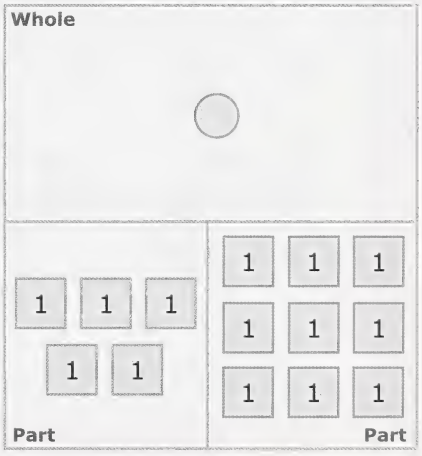
5.



Equation: _____

□ = _____

6.



Equation: _____

○ = _____

For 7 - 22: Solve for the unknown value.

7. △ + 4 = 9
   △ = _____

8. □ + 12 = 21
   □ = _____

9. ○ − 5 = 12
   ○ = _____

10. □ − 12 = 11
    □ = _____

11. △ − 8 = 5
    △ = _____

12. ○ + 27 = 31
    ○ = _____

13. □ + 19 = 43
    □ = _____

14. △ − 12 = 8
    △ = _____

15. ○ + 8 = 12
    ○ = _____

16. △ − 4 = 8
    △ = _____

17. △ − 6 = 7
    △ = _____

18. ○ + 32 = 37
    ○ = _____

19. □ + 23 = 65
    □ = _____

20. △ − 8 = 17
    △ = _____

21. ◯ + 14 = 21

◯ = _____

22. △ − 9 = 13

△ = _____

For 23 - 27: Write an equation for the sentence.

23. a number plus five is seven _____

24. a number minus eleven is fourteen _____

25. the sum of a number and twelve is eighteen _____

26. the difference of a number and four is six _____

27. a number minus four is twelve _____

28. Reflect: What section of the part-whole model is represented by the unknown in a subtraction equation? What section is represented by the unknown in an addition equation? How do you know?

29. Reflect: What method did you most often use to solve the equations in numbers 7 – 22 (guess-and-test, part-whole model, or other)? Explain your method in words. Why is it easier for you?

1. 8 x 9 = _____

2. _____ x 5 = 40

3. 4 x 7 = _____

For 4 - 5: Complete the tables:

4.

A	B
1	7
2	14
3	21
4	
5	

5.

A	B
1	4
2	12
3	36
4	
5	

Lesson 6

Multiplication and Division Equations

Exploration 1: Multiplication Table and Equations

Materials: Multiplication Table from the back of this Unit in your Workbook, Crayons or Counters, Paper, Pencil

1. Use the Multiplication Table. For the equation ☐ ÷ 8 = 5, follow the 8 row across and the 5 column down at the same time. The number in the intersection is the answer.

2. For the equation ☐ x 7 = 42, follow the 7 row across until you get to 42. Now follow that column up and identify the number at the top. This is the unknown.

3. Try these using the multiplication table:

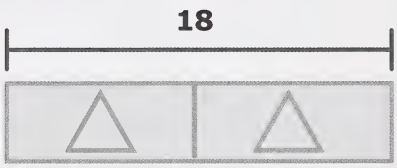
☐ ÷ 4 = 3	☐ ÷ 2 = 9	☐ ÷ 7 = 4
☐ x 4 = 12	☐ x 9 = 18	☐ x 4 = 28

4. Reflect: How does a multiplication equation relate to a division equation? Use an example to explain your answer.

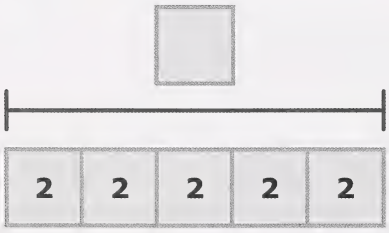
For 1 - 4: Complete the equation for the picture model shown.

1. □ ÷ _____ = _____

2. △ x _____ = _____



3. □ ÷ _____ = _____



4. □ x _____ = _____

For 5 - 20: Solve for the unknown value.

5. △ x 4 = 12
   △ = _____

6. □ ÷ 2 = 6
   □ = _____

7. ○ ÷ 5 = 3
   ○ = _____

8. □ x 2 = 16
   □ = _____

9. △ ÷ 2 = 3
   △ = _____

10. ○ ÷ 3 = 9
    ○ = _____

11. □ x 3 = 21
    □ = _____

12. △ x 4 = 24
    △ = _____

13. ○ x 8 = 40
    ○ = _____

14. △ ÷ 3 = 5
    △ = _____

15. △ ÷ 6 = 4
    △ = _____

16. ○ ÷ 7 = 6
    ○ = _____

17. □ x 5 = 40
□ = _____

18. △ x 9 = 45
△ = _____

19. ○ x 7 = 49
○ = _____

20. △ ÷ 8 = 7
△ = _____

For 21 - 25: Write an equation for each sentence.

21. a number divided by six is twelve _____

22. some number times four equals twenty _____

23. the quotient of a number and 3 is 4 _____

24. a number multiplied by two is fifty _____

25. the product of a number and eleven is 132 _____

26. Reflect: What type of equation is most challenging to you and why?

27. Reflect: What method did you most often use to solve problems 5 – 20? Describe the method and explain why it is easier for you.

1. 2 x 28 = _____

2. 15 x 3 = _____

3. 48 ÷ 6 = _____

4. Write 327 in expanded form. _____

5. Describe the relationship of ◯ to △. Can you write this as an equation?

◯	△
1	5
2	10
3	15
4	20
5	25

Lesson 7

Problem Solving with Equations

Exploration 1: Writing Word Problems

Materials: Algebra Tiles, Part-whole Mat

1. Create an addition equation. Write your equation and solve it.

2. Create a story problem for your equation.

3. Create a subtraction equation. Write your equation and solve it.

4. Create a story problem for your subtraction equation.

5. Create a multiplication equation. Write your equation and solve it.

6. Create a story problem for your multiplication equation.

7. Create a division equation. Write your equation and solve it.

8. Create a story problem for your division equation.

Addition/Subtraction

For 1 - 6: Create a part-whole model for the problem and solve.

1. Mark has 10 new downloads on his mp3 player. Leslie has 4 less downloads than Mark. How many downloads does Leslie have?

   a. Complete the part-whole model:

Whole	
Part	Part

   b. Write an equation for the problem.

   c. How many downloads does Leslie have? Write the answer as a sentence.

2. Henry had 12 pieces of pizza. His brother had 5. How many pieces of pizza did they have all together?

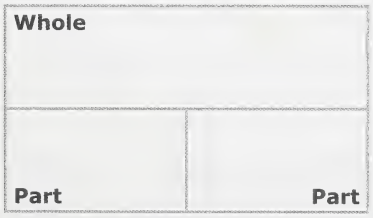
   a. Complete the part-whole model:

   b. Write an equation for the problem.

   c. How many pieces of pizza did they have all together? Write the answer as a sentence.

3. Mrs. James has 18 students in her class. Mrs. Moore has five more students than Mrs. James. How many students does Mrs. Moore have?

   a. Complete the part-whole model:



   b. Write an equation for the problem.

c. How many students does Mrs. Moore have? Write the answer as a sentence.

4. Cameron sold 20 tickets to the school play. Alyssa sold 8 tickets. How many tickets did they sell all together?

a. Complete the part-whole model:

b. Write an equation for the problem.

c. How many tickets did they sell all together? Write the answer as a sentence.

5. There are 18 pairs of shoes in the Jones' closet. 7 pairs belong to Alyssa. How many pairs of shoes belong to the rest of the family?

   a. Complete the part-whole model:

   b. Write an equation for the problem.

   c. How many pairs of shoes belong to the rest of the family? Write the answer as a sentence.

6. Zach has 22 socks in his drawer. 12 are white. The rest are black. How many of Zach's socks are black?

   a. Complete the part-whole model:

   b. Write an equation for the problem.

c. How many of Zach's socks are black?

Multiplication/Division

For 7 - 13: Create a model to represent each problem and solve.

7. Lian has 3 new plants in her garden. Each plant makes 4 flowers. How many flowers will there be in her garden?

   a. Create a model to represent the problem.

   b. Write an equation for the problem.

   c. How many flowers will there be in Lian's garden?

8. Cameron has 12 pieces of pizza. He wants to share them equally with his two brothers. How many pieces will each brother have?

   a. Create a model to represent the problem.

b. Write an equation for the problem.

c. How many pieces will each brother have?

9. Alyssa has 20 pictures. Alyssa has 10 times as many pictures as Nina. How many pictures does Nina have?

a. Create a model to represent the problem.

b. Write an equation for the problem.

c. How many pictures does Nina have?

10. Nina sold twice as many tickets as Zach. If Nina sold 20 tickets, how many did Zach sell?

a. Create a model to represent the problem.

b. Write an equation for the problem.

c. How many tickets did Zach sell?

11. Pete collects toy racecars and puts them in boxes with the same number of cars in each box. He has 36 racecars. Pete has 3 boxes of racecars. How many cars are in each box?

    a. Create a model to represent the problem.

    b. Write an equation for the problem.

    c. How many cars are in each box?

12. Amber has twice as many points in a board game as Leah. Leah has 12 points. How many points does Amber have?

    a. Create a model to represent the problem.

b. Write an equation for the problem.

c. How many points does Amber have?

13. Molly has four more tokens than J.C. has. Molly has 9 tokens. How many tokens does J.C. have?

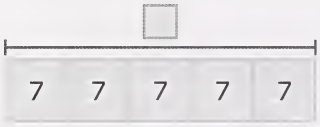
a. Create a model to represent the problem.

b. Write an equation for the problem.

c. How many tokens does J.C. have?

14. Reflect: Is there anything you still don't understand at the end of this unit?

15. Reflect: Write a word problem for the model shown:



Mixed Review

1. What is the relationship between ○ and □ ? Can you write the relationship as an equation?

○	□
1	5
2	6
3	7
4	8
5	9

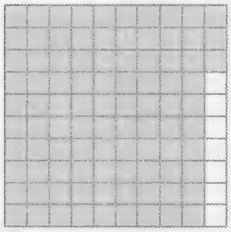
2. Write the numbers in order from least to greatest:

   2 497 3 122 2 541 2 899 2 673

   _____

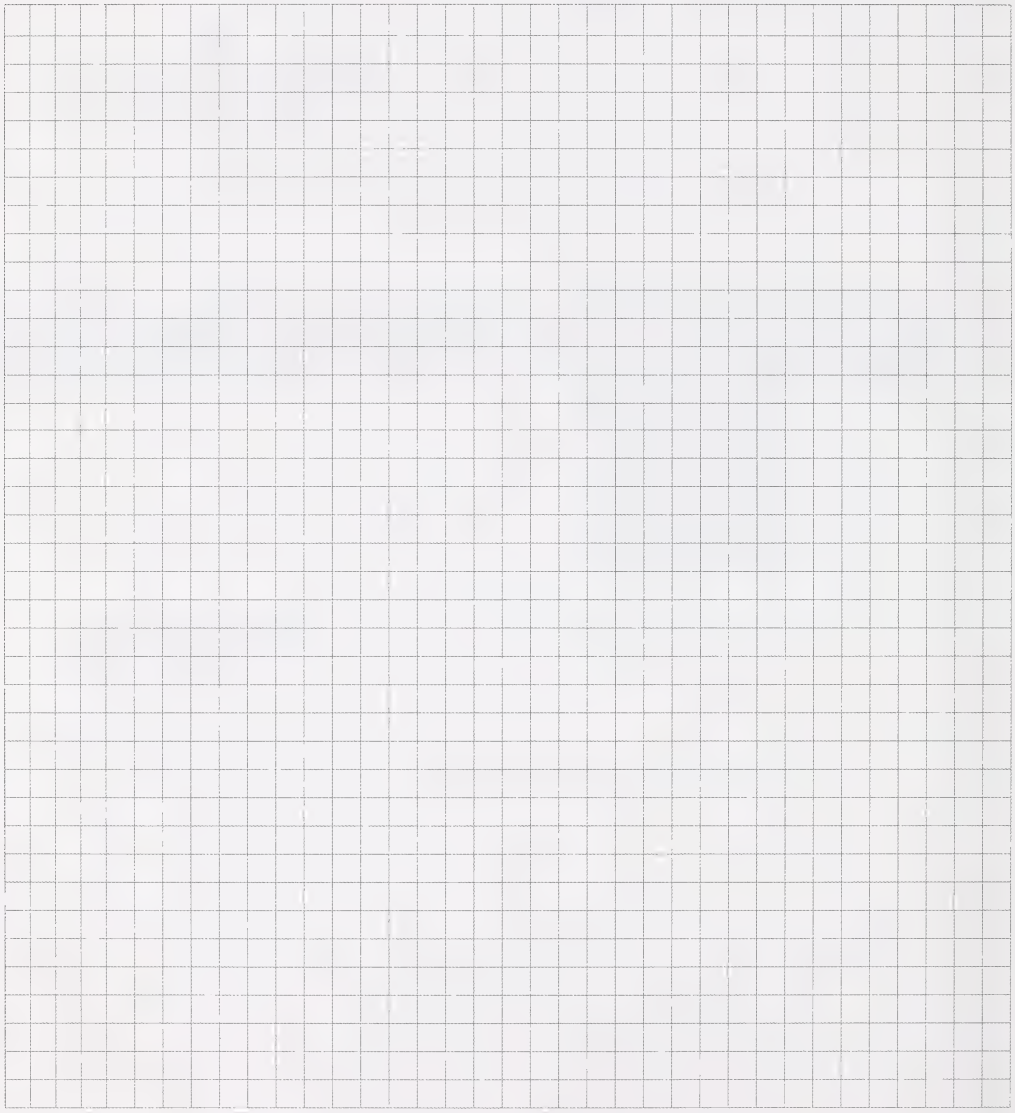
3. Write zero and eighty five hundredths as a decimal. _____

4. Write a decimal and a fraction for the model:

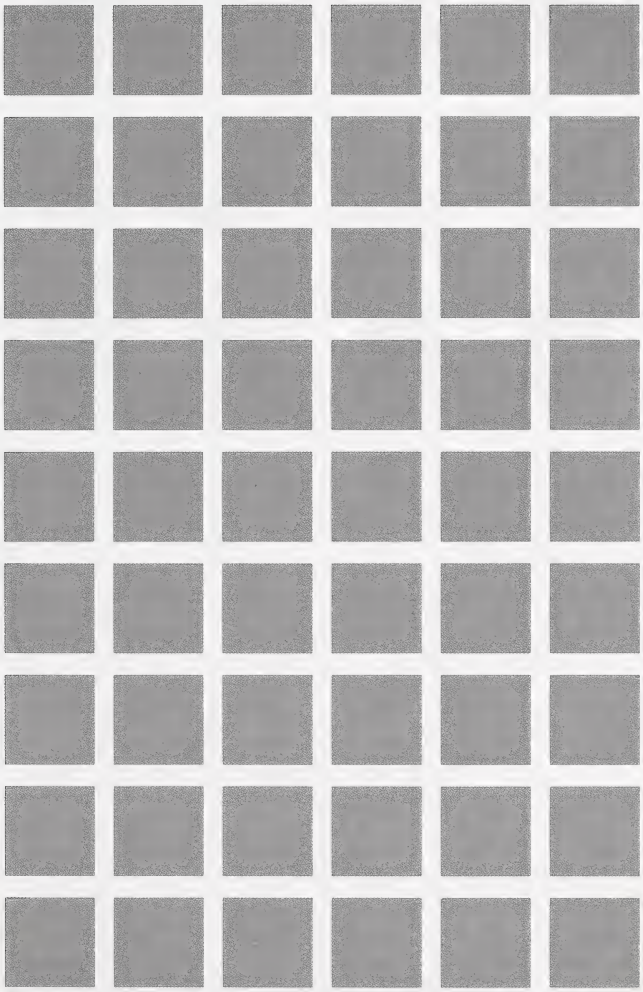


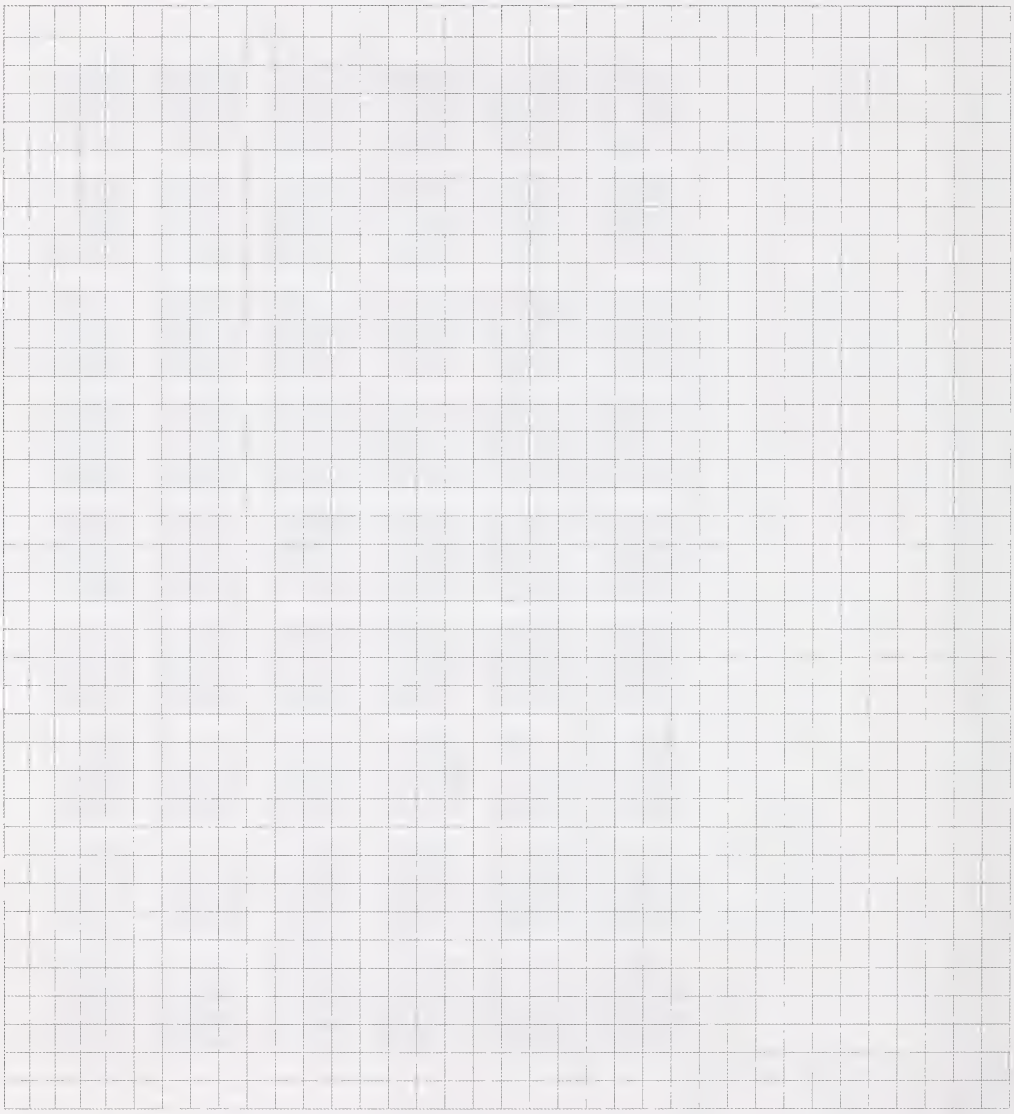
   Fraction: _____ Decimal: _____

5. Write 0.23 as a fraction. _____

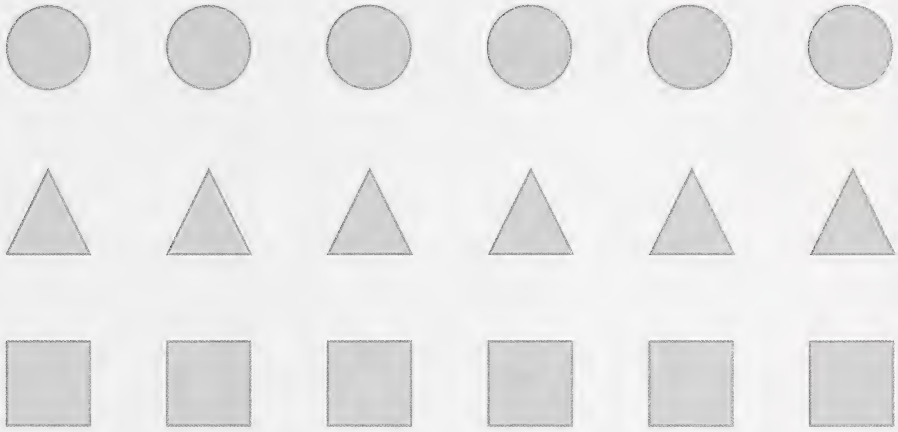


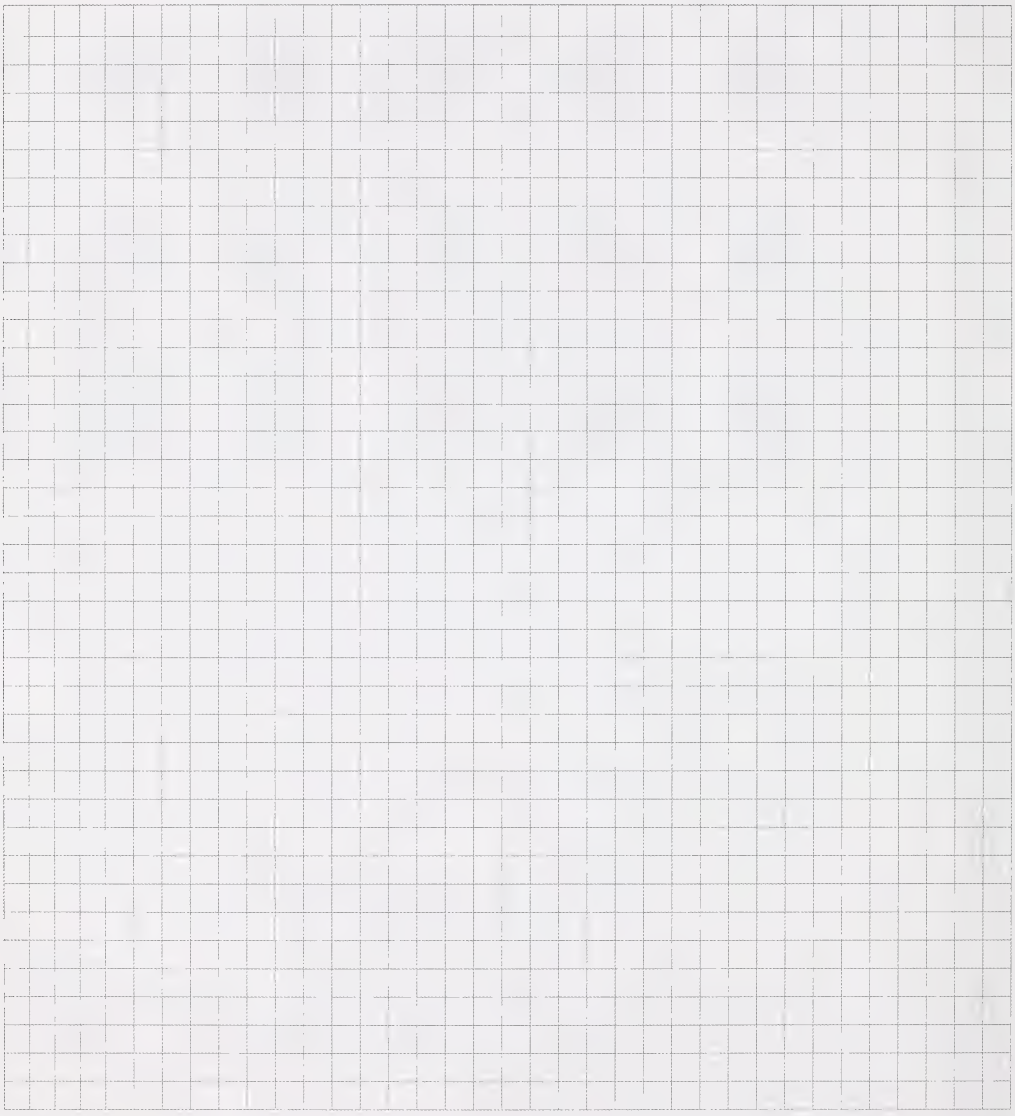
Square Counters





Pattern Blocks





Multiplication Tables

x	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

x	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

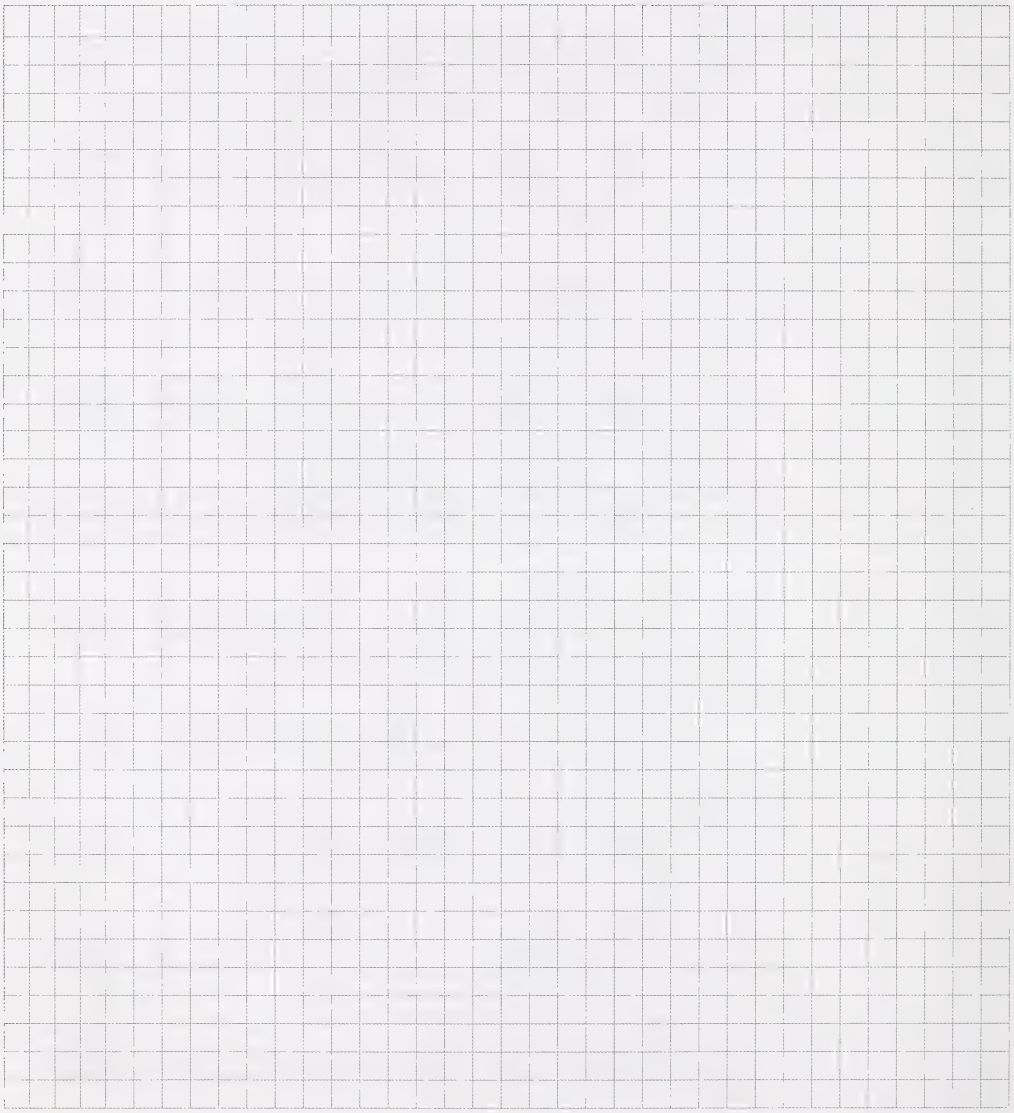
Hundreds Charts

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

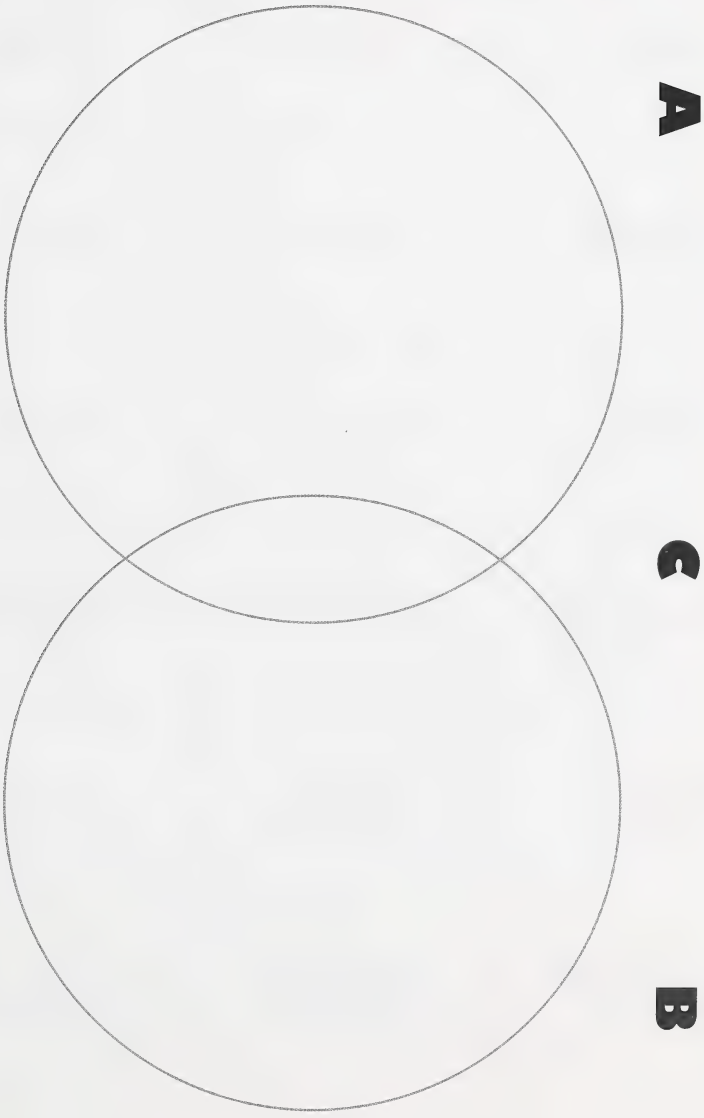
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

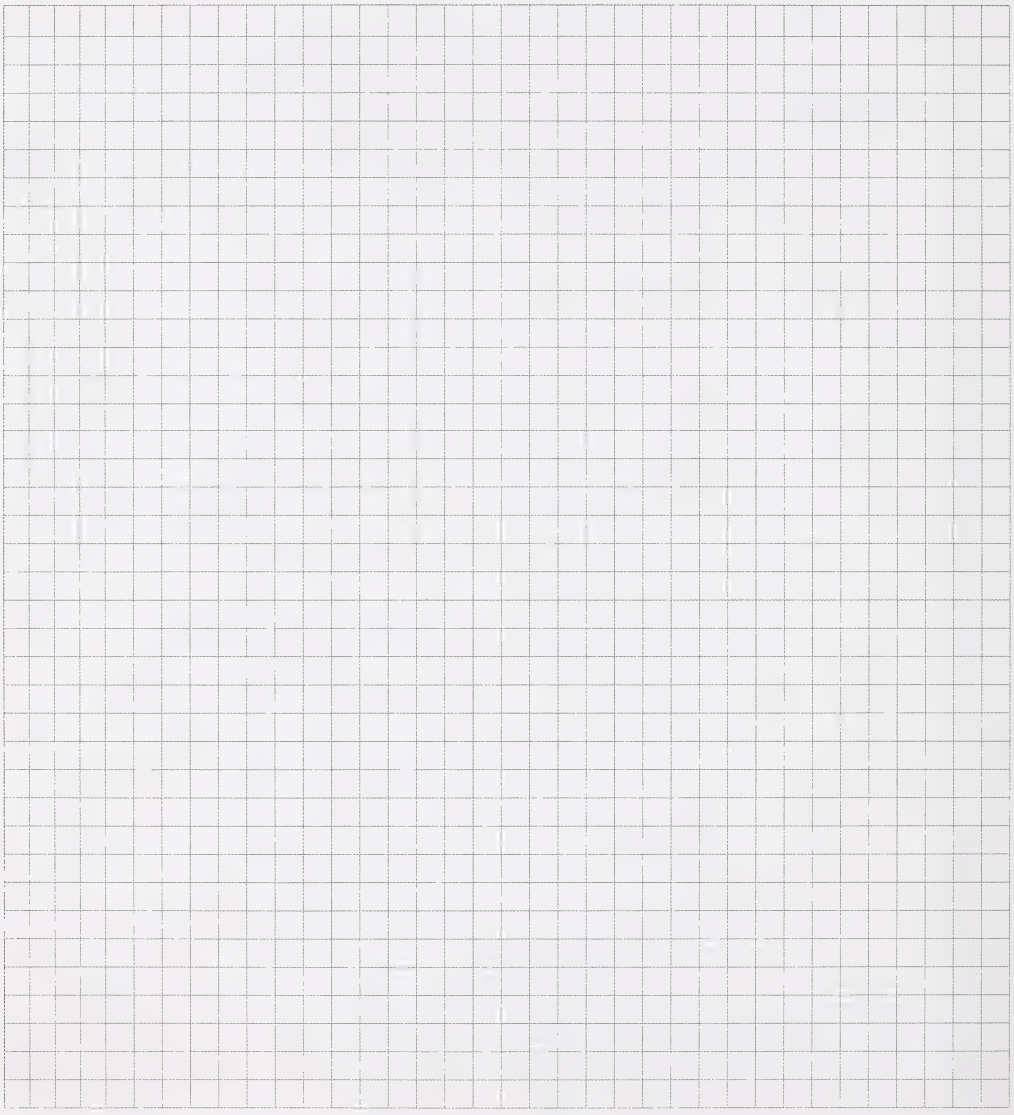
Number Squares

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60



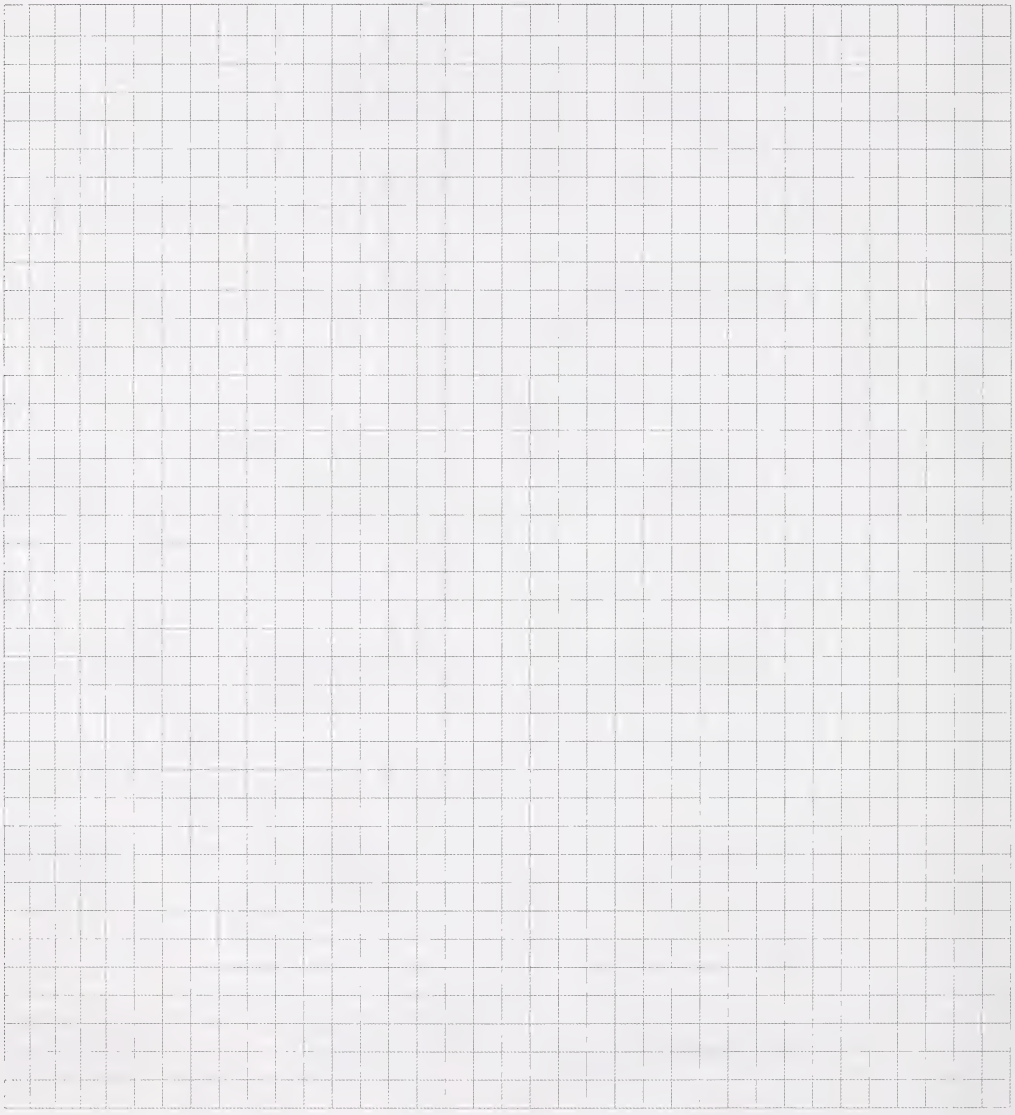
Venn Diagram Mat





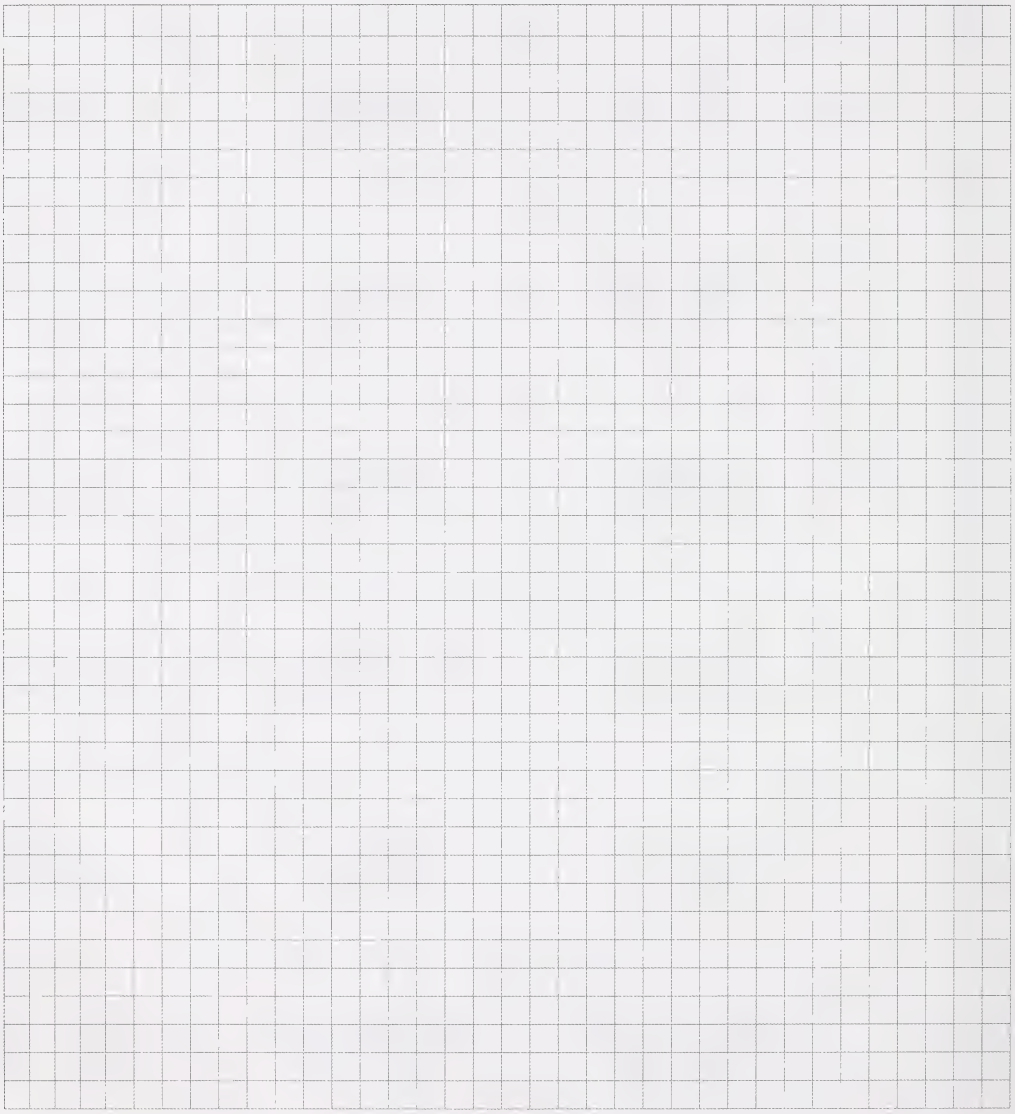
Geometry Labels

Yellow	Blue	Red
Not Yellow	Not Blue	Not Red
Green	Triangle	Square
Not Green	Not Triangle	Not Square
Rectangle	Large Triangle	Medium Triangle
Not Rectangle	Not Large Triangle	Not Medium Triangle



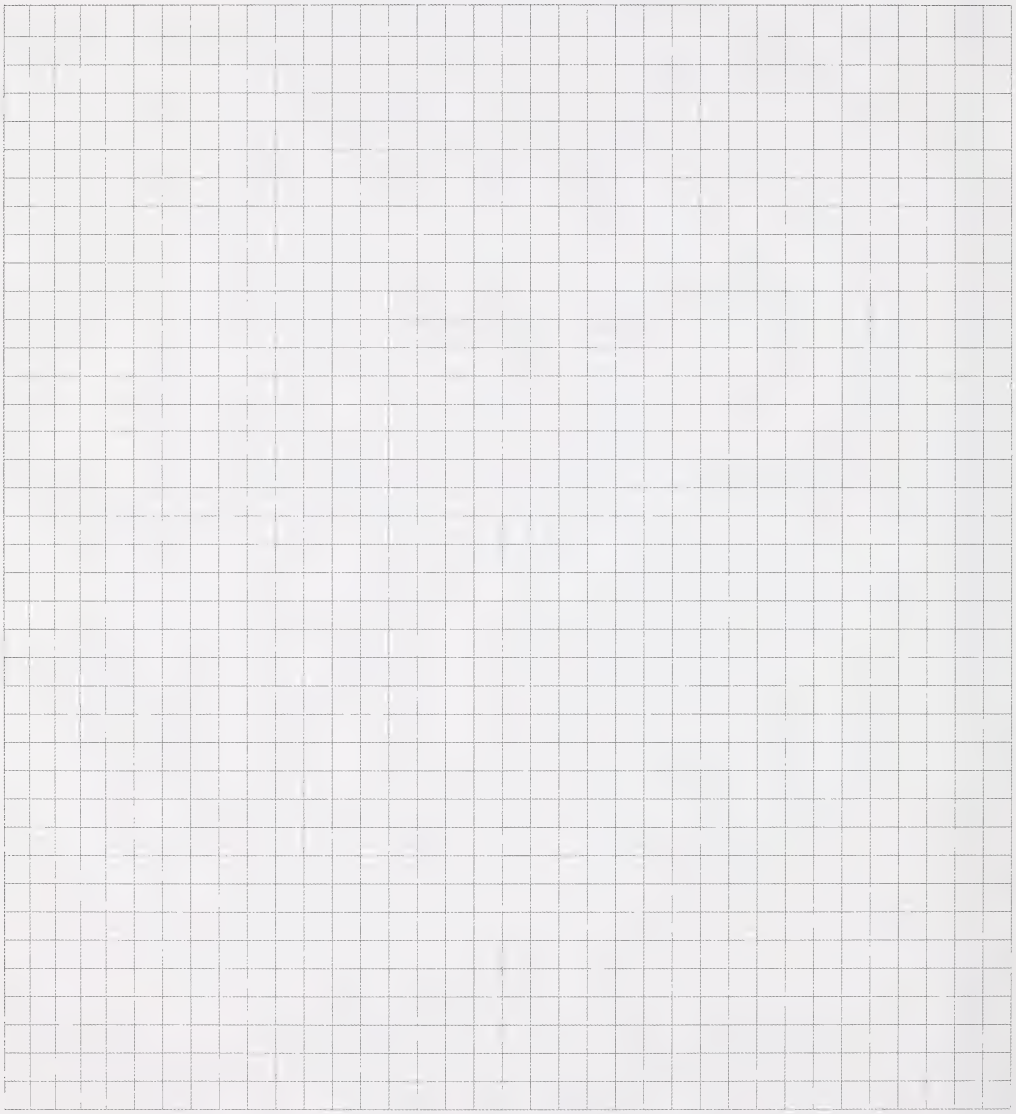
Geometry Labels

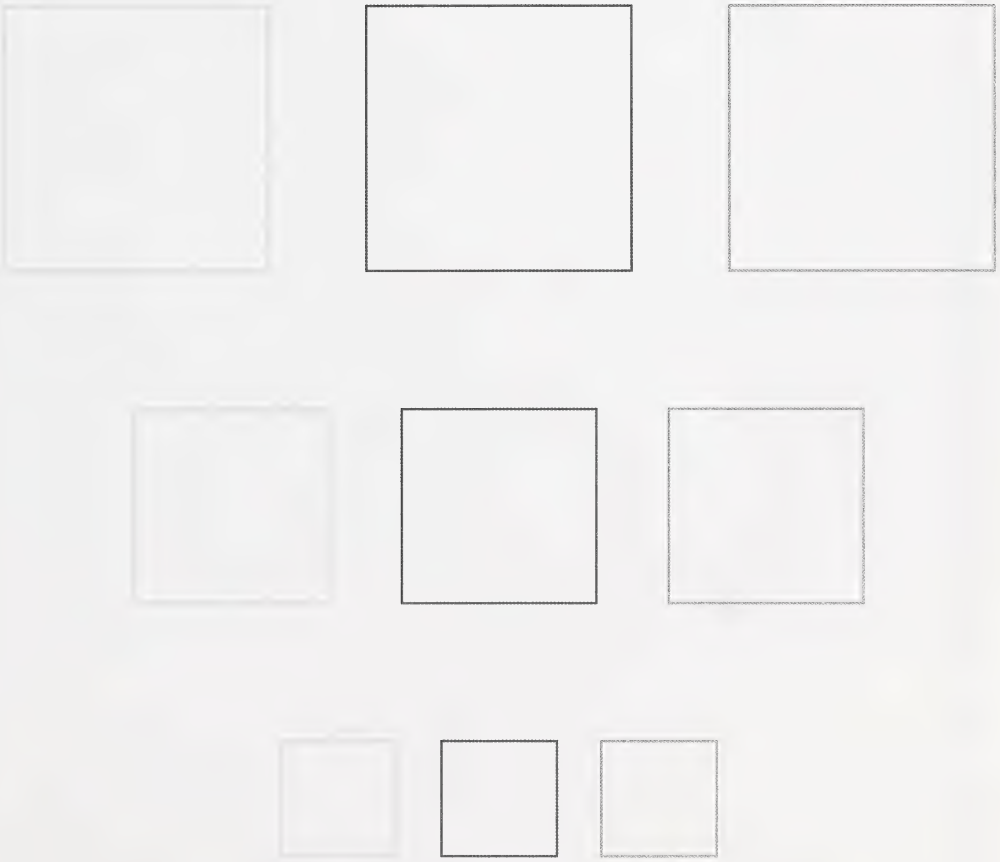
Small Triangle	Triangle	Square
Not Small Triangle	Not Triangle	Not Square
Large Rectangle	Medium Rectangle	Small Rectangle
Not Large Rectangle	Not Medium Rectangle	Not Small Rectangle
Small Square	Medium Square	Large Square
Not Small Square	Not Medium Square	Not Large Square

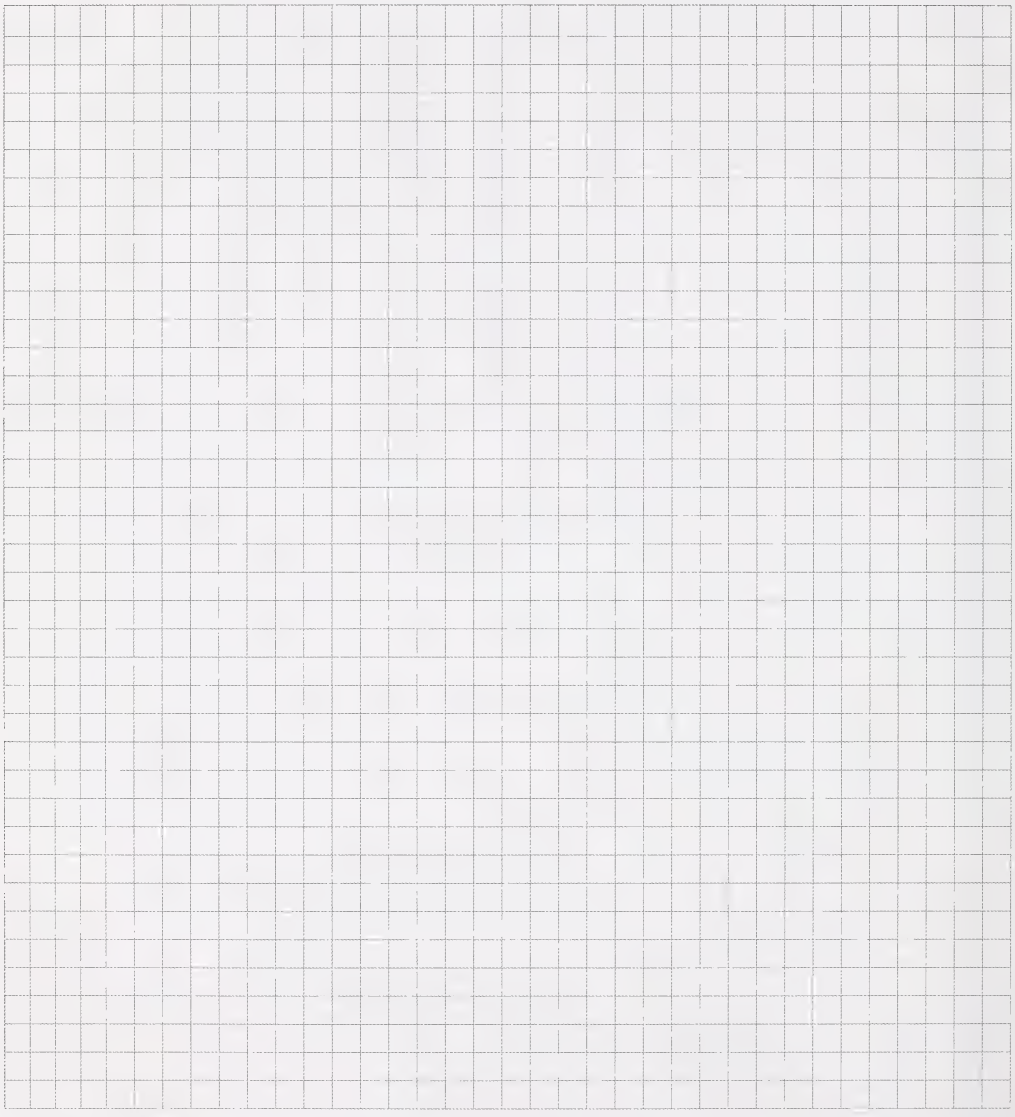


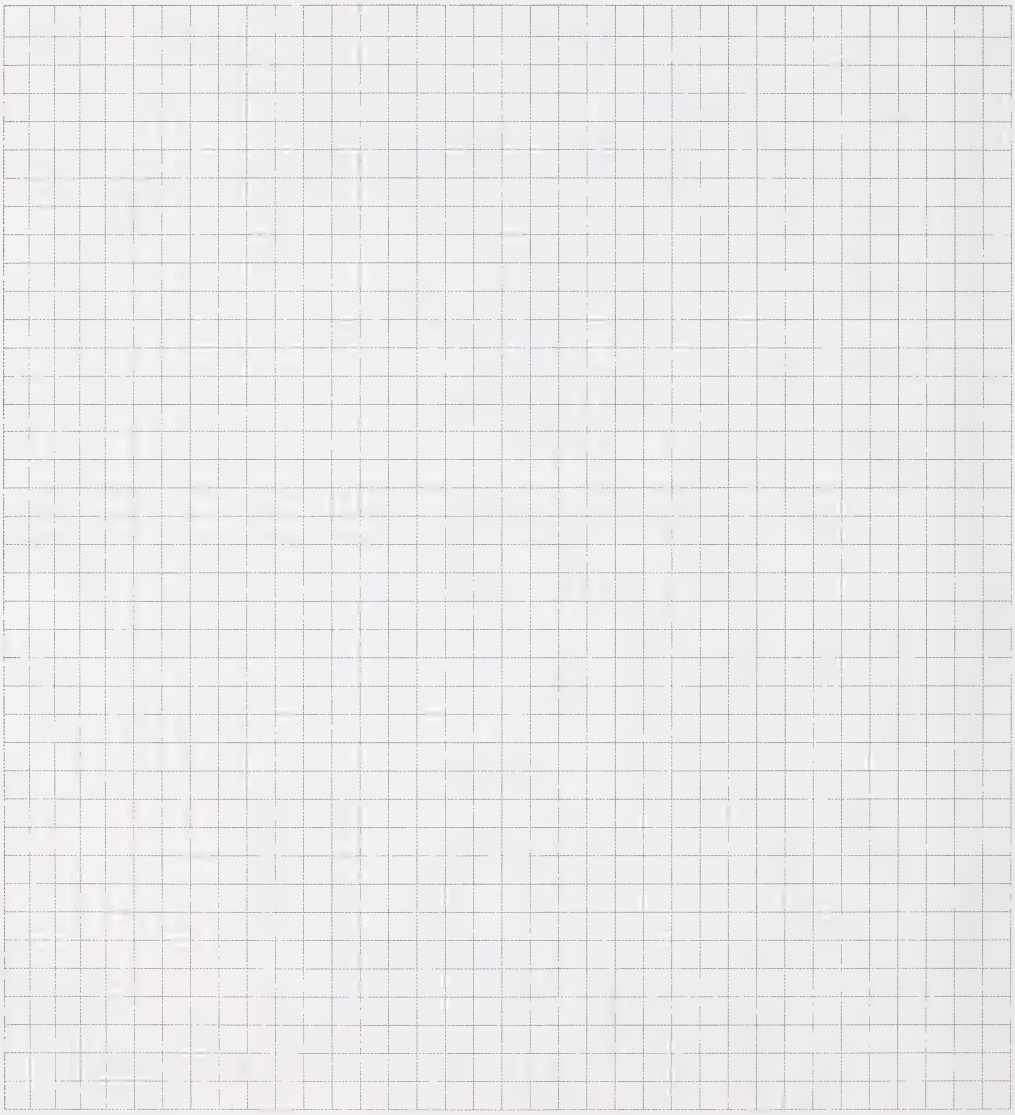
Geometry Shapes

Colour in the different shapes with your crayons. There are three shapes in each size. Colour one shape yellow, one red, and one green for each of the different sizes.

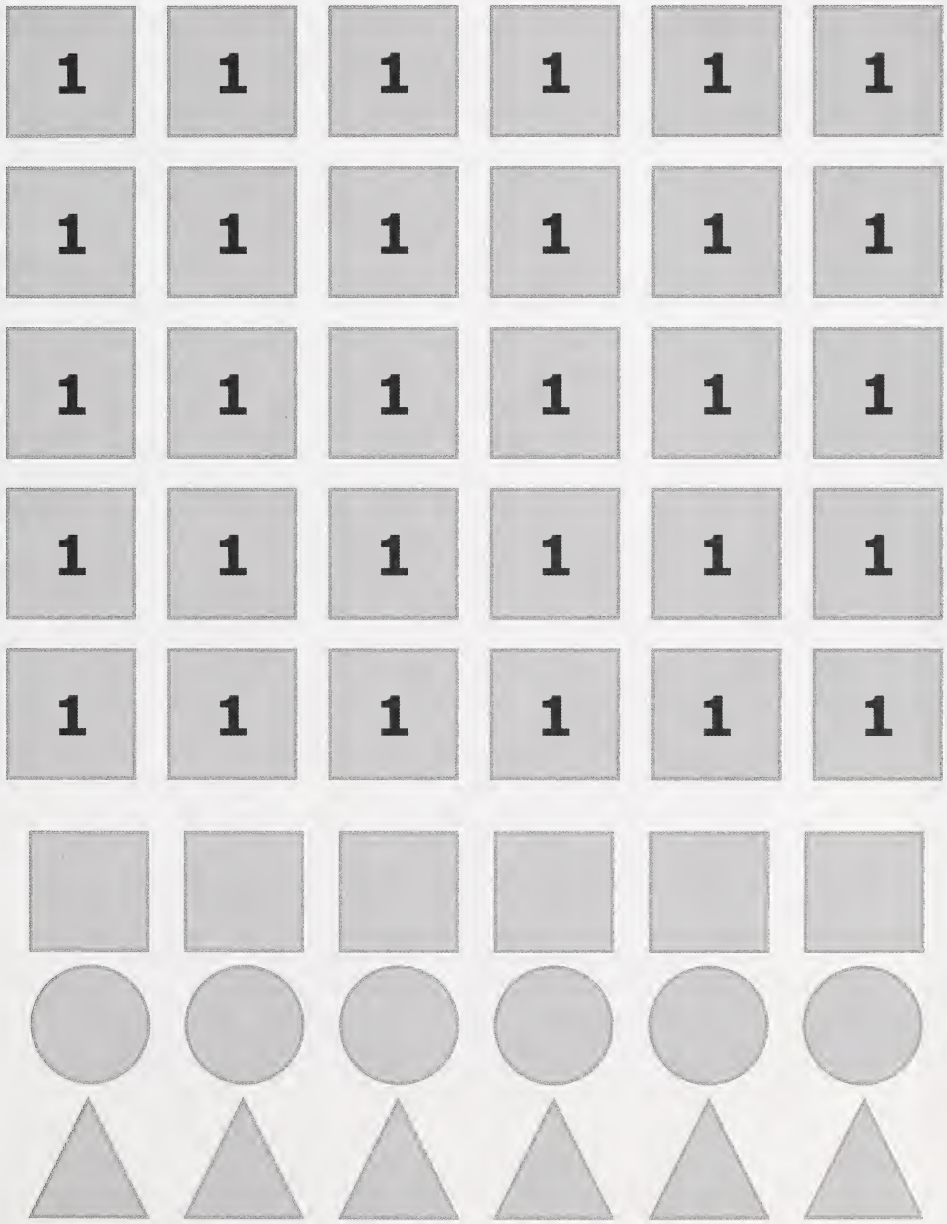


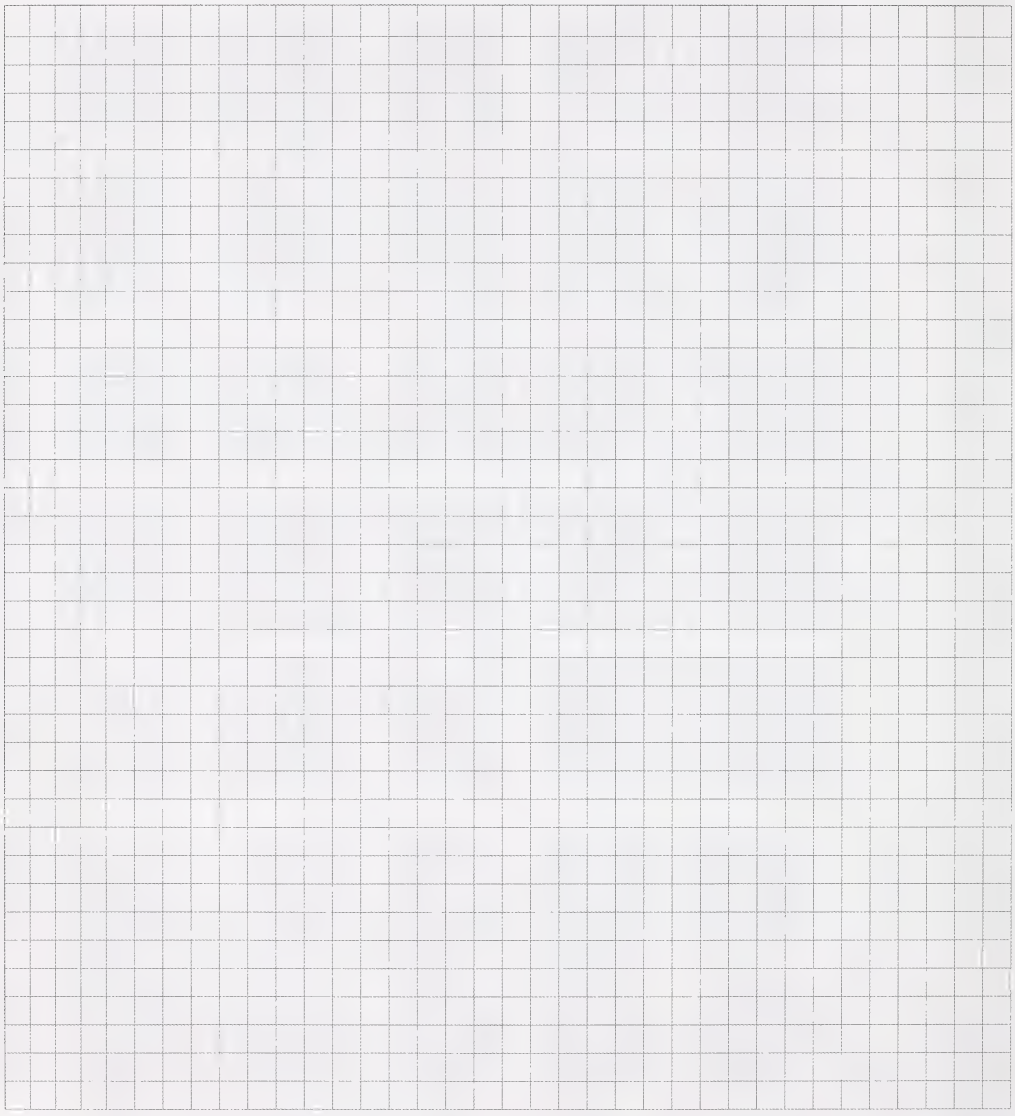






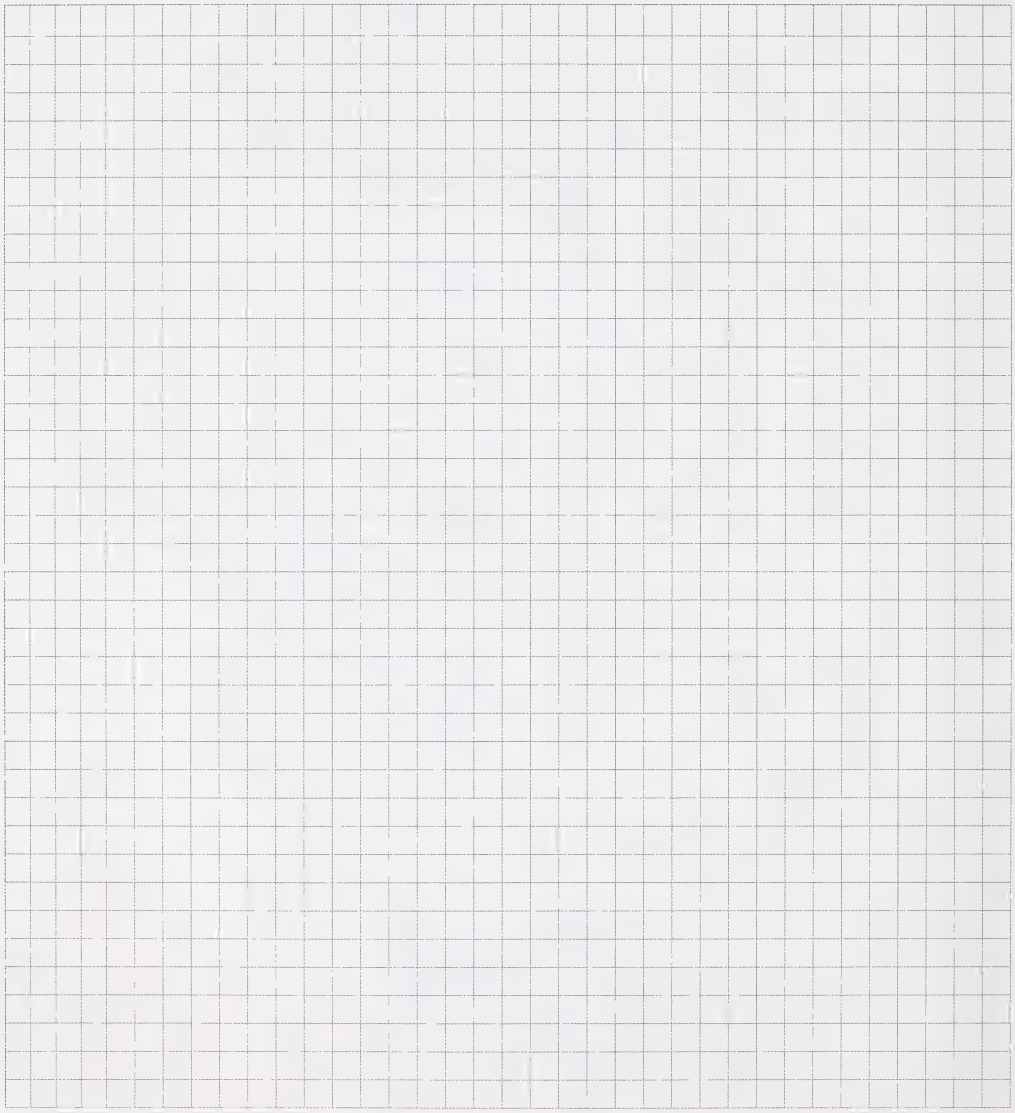
Algebra Tiles



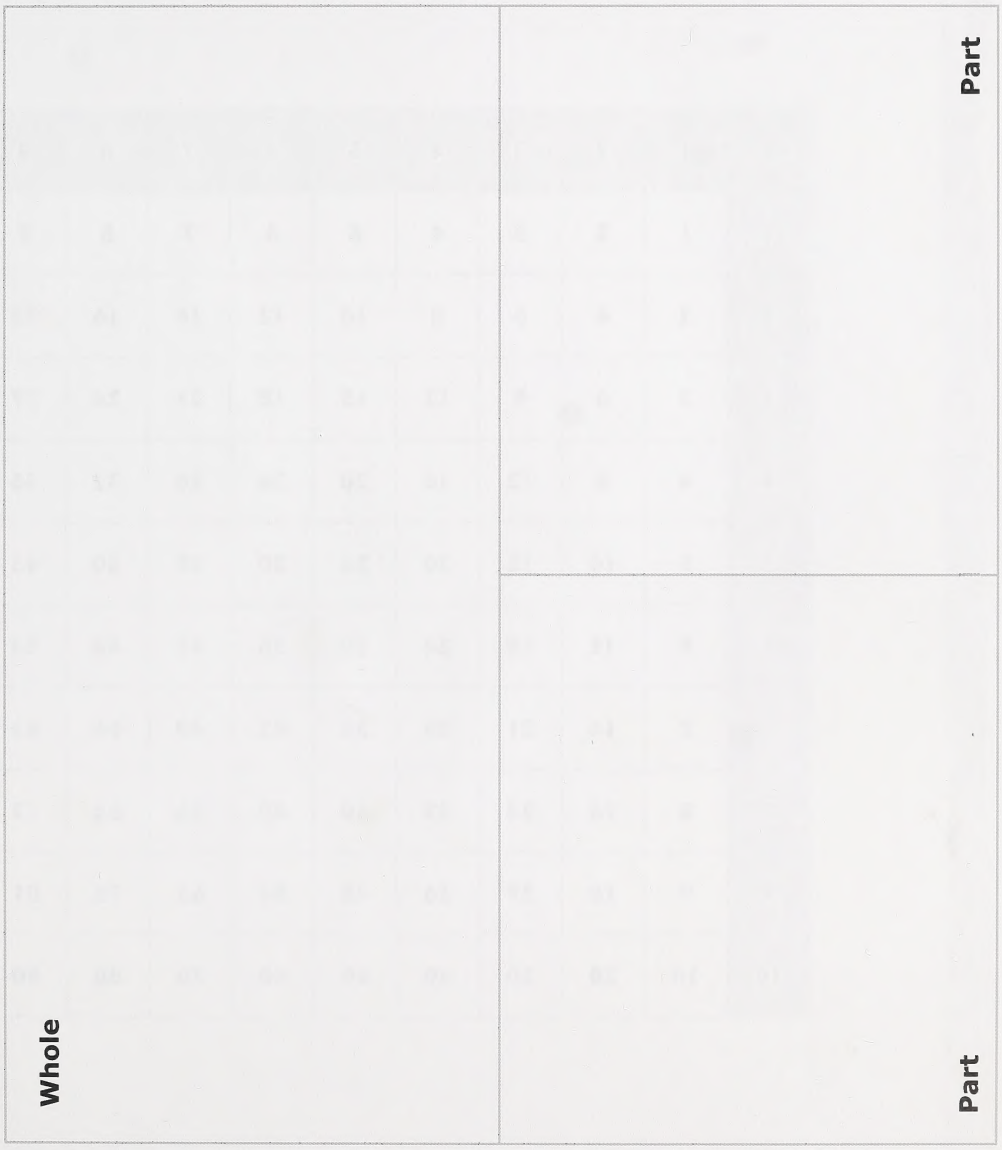


2 Part Mat

Part
Part



Part-Whole Mat



Multiplication Table

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

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